

# FY13 CALL FOR PROPOSALS

**NOTE: FUNDING IS CONTINGENT ON FEDERAL BUDGET RESOLUTION**

- I. **Hatch Projects** (individual investigator, multiple investigator interdisciplinary, and multistate)
- II. **McIntire-Stennis (M-S) Projects** (individual investigator and multiple investigator interdisciplinary)

- **Funding Period: FY 2013 (October 1, 2012 – September 30, 2013)**
- **Submission Deadline: Friday, September 9, 2011, by 4:30 p.m. to the WAES Office via WISPER. Time extension requests will not be granted.**
  - *Proposals received after 4:30pm on September 9, 2011 will not be accepted*
- **Proposals must be submitted via the WISPER system.**
  - *Proposals must have all approvals (Chair/Administrator/Co-PIs) for the proposal to be accepted.*
  - *Attachments to the WISPER record must include the budget worksheets and the full proposal.*
  - *Document type selected must be “Hatch” (This must be selected for Hatch, Hatch Multistate, and McIntire-Stennis proposals.)*
  - *Proposals must be routed to Angela Seitler and an approval request must be sent to Casey Hillmer.*
- **Review Schedule: October-November, 2011**
- **Funding Decisions Announced: December 2011 – January 2012**
- **For more information or assistance: contact Angie Seitler at 261-1432, [aseitler@cals.wisc.edu](mailto:aseitler@cals.wisc.edu); Casey Hillmer at 262-2397, [clhillmer@cals.wisc.edu](mailto:clhillmer@cals.wisc.edu) -or online - <http://www.cals.wisc.edu/waes/>**

## Attachments (available on website listed below):

- **Hatch, Hatch Multistate, and McIntire-Stennis Project Information** (p. 3)
- **Excerpts from Congressional Acts/NIFA’s Five National Priorities** (pp. 4-5)
- **Areas of Identified Research Need for Wisconsin** (p. 5)
- **Nature of the Proposal Review** (p. 6)
- **Proposal Submission Information/Format** (pp. 7-9)
- **Policies and Procedures -- Formula (142) Funds** (pp.10-12)
- **Appendix A** (pp. 13-21)
- **Proposal Cover Page and Worksheets for Project Budgets** (see website: <http://www.cals.wisc.edu/waes/>)

NOTE – There will be no additional Call for Sustainable Agriculture proposals this year.

**\* Please review the Hatch Multistate and Integrated Activity Priorities on the next page before proceeding further.\***

*USDA funding is available without discrimination on the basis of race, color, national origin, sex, age, or disability.*

In accordance with guidelines on the spending of federal formula grants, please refer to the original Hatch, McIntire-Stennis, and Animal Health legislation, as well as NIFA's Five National Priority Areas. Reviewers will be determining the appropriateness of your proposal for funding source using these guidelines (pgs. 5-6). Proposals of high scientific merit that do not justify the appropriateness for funding from this source may not rank high enough to fund. **Hatch Multistate and projects that include an integrated activity (instruction/research or outreach/research) will receive higher priority. Integrated activities may include undergraduate research experiences, K-12 related instruction or outreach, and other public outreach efforts related to this work.** Funding is limited and less than 50% of proposals are likely to be approved.

### **Hatch and McIntire-Stennis Interdisciplinary Projects:**

Hatch, Hatch Multistate, and McIntire-Stennis Interdisciplinary projects can be requested for up to four years. Interdisciplinary projects can include investigators from the same department if the investigators represent different disciplinary fields. A clear justification for the role of each investigator in the project must be included.

### **Hatch Multistate and Integrated Activity Priorities**

Due to the requirement that we must commit 25% of our Hatch funding portfolio respectively to Multistate projects and to projects with integrated activity, these areas must receive priority for funding. These can be individual investigator or multidisciplinary proposals. Information on Hatch Multistate projects (Formula Grants) can be found at <http://www.cals.wisc.edu/waes>.

**Priority will be given to Multistate proposals with integrated activity These projects must be of quality that would normally merit funding.** We do expect to fund projects that do not address these requirements as we recognize the need to maintain balance and quality in our portfolio.

**Multistate** project proposals must fit within the project objectives of funded projects (National, NC, NE, S or W projects). Information on these projects can be found by logging onto the following website as a guest member: <http://www.nimss.umd.edu/>, clicking on "Project Home" and then to the National, NC, NE, S or W links for lists and information on projects. See Appendix A for a list of eligible Multistate projects available.

**Integrated activities** may include undergraduate research experiences, formal inclusion of this work as part of an instructional program, K-12 related instruction or outreach, and other public outreach efforts related to this work including Extension related activities. These efforts must be formally addressed within the proposal.

### **Additional important information --**

- If you are or have been a recipient of a Formula Grant, it is an expectation that you are willing and available to review the proposals of other applicants if requested to do so.
- If you are delinquent in completing the required CRIS annual report(s), your continued funding may be jeopardized and you may lose the ability to submit future Formula Grant proposals.

### **Hatch, Hatch Multistate, and McIntire-Stennis Project Information**

Hatch funding is open to faculty members in CALS and SOHE. Faculty from other colleges and universities may be collaborators on a project. However, it should be demonstrated the needed expertise does not exist within CALS or SOHE and an appropriate matching commitment of resources is evident. Proposals should reflect external funding sources, if applicable.

Investigators may submit proposals for an individual investigator Hatch grant and a multiple investigator interdisciplinary Hatch grant. Investigators may not be the Principal Investigator on more than one individual project.

As in the past, the Hatch competition will continue to support a wide range of research. However, as a result of USDA's new National Priorities, each proposal **MUST** be strongly linked to one or more of the Five National Priorities (see pg. 10 and 11). **Proposals not addressing one or more of the Five National Priorities will not be accepted for review.** Graduate training is central to use of formula funding and exceptions will not be considered. Each proposal is judged on appropriateness of proposed research for formula funding, quality of the science, and likelihood of successful achievement of those goals.

Interdisciplinary proposals with multiple investigators will be considered in the open competition with the following considerations:

- High quality of research work proposed
- Special emphasis on problem solving for Wisconsin
- Realistic budgets (although these may be larger than individual investigator projects)
- Proposals should specify separate budgets for each investigator, with explicit division of work to be done by each team member. A composite budget should also be entered on the budget form.
- Evidence the interdisciplinary team has worked together on the proposal, including signatures of all involved. Include a section detailing how the team will function, and mechanisms for joint coordination.
- Plans to link the research to extension, outreach, or teaching activities should be clearly indicated.
- Demonstration of productivity from past and present formula funding for all collaborators.
- Typically, interdisciplinary projects are for a two-year term.

### **Types of support that may be requested**

CALS objective is to support graduate student training. Each project should include support for one 50% graduate student and a small supply budget. Most awards will be in the range of \$40,000 to \$43,000/yr. Alternative staffing requests will not be considered. In order to maximize the number of projects we can support, budget categories for supplies, travel for the collection of research data, and labor should not exceed a combined total of \$4,000 per year. Costs associated with the use of the Agricultural Research Station (ARS) facilities for your research project should be included in the \$4,000 per year total. A minimum of 5%, up to a maximum of 10% of a faculty's effort/salary should be included in the proposal per year. Please be aware that the effort you indicate within the proposal will be payrolled (salary) effort on the project.

Please be aware that if your proposal is approved for funding, your budget is not necessarily approved as requested. Funding levels are approved a few months prior to the start of the project. Funding approvals are contingent on funding availability and allowability (OMB Circulars, CALS Policies and Procedures, etc.) on Formula Grants. Requested items and/or funding categories are subject to disallowance.

Proposals related to official multistate projects (see list at NIMSS website – <http://www.nimss.umd.edu/>) are particularly encouraged. Proposals should relate the Wisconsin component to the overall project objectives and state the project number (or temporary number for proposed project). Given the funding mandates of the Hatch program that require 25% or more of our portfolio to be made up of multistate projects, these proposals will receive additional consideration for funding as well as travel to the multistate annual meetings. If approved by the CALS review panel, these projects will be on the WI funding list even if the regional approval of the project does not occur when associated with a temporary number.

**Please refer to the following excerpts from original Congressional Acts and NIFA's Five Priorities in justifying appropriateness of your proposals:**

**Hatch Act**

Act of March 2, 1887, Ch.314, 24 Stat. 440 7 U.S.C. 361a et seq.  
As amended August 11, 1955, ch. 790, 68 Stat. 671  
Excerpt from Section 2

*"... It shall be the object and duty of the State agricultural experiment stations through the expenditure of the appropriations hereinafter authorized to conduct original and other researches, investigations, and experiments bearing directly on and contributing to the establishment and maintenance of a permanent and effective agricultural industry of the United States, including researches basic to the problems of agriculture in its broadest aspects, and such investigations as have for their purpose the development and improvement of the rural home and rural life and the maximum contribution by agriculture to the welfare of the consumer, as may be deemed advisable, having due regard to the varying conditions and needs of the respective States."*

**McIntire-Stennis Act**

Act of October 10, 1962, Public Law 87-788, 76 Stat. 806, 16 U.S.C. 582a, et seq.  
Excerpt from Section 7

*" The term "forestry research" as used in this Act shall include investigations relating to " (1) Reforestation and management of land for the production of crops of timber and other related products of the forest; (2) management of forest and related watershed lands to improve conditions of waterflow and to protect resources against floods and erosion; (3) management of forest and related rangeland for production of forage for domestic livestock and game and improvement of food and habitat for wildlife; (4) management of forest lands for outdoor recreation; (5) protection of forest land and resources against fire, insects, diseases, and other destructive agents; (6) utilization of wood and other forest products; (7) development of sound policies for the management of forest lands and the harvesting and marketing of forest products; and (8) such other studies as may be necessary to obtain the fullest and most effective use of forest resources."*

**Animal Health and Disease Research Program**

Section 1433 of Subtitle E (Sections 1429-1439), Title XIV of Public Law 95-113 (7 U.S.C. 3191-3201), as amended, 1981.

**SEC. 1429.** *"It is the purpose of this subtitle to promote the general welfare through the improved health and productivity of domestic livestock, poultry, aquatic animals, and other income-producing animals which are essential to the Nation's food supply and the welfare of producers and consumers of animal products; to improve the health of horses; to facilitate the effective treatment of, and, where possible, prevent animal and poultry diseases in both domesticated and wild animals which, if not controlled, would be disastrous to the United States livestock and poultry industries and endanger the Nation's food supply; to minimize livestock and poultry losses due to transportation and handling; to protect human health through control of animal diseases transmissible to humans; to improve methods of controlling the births of predators and other animals; and otherwise to promote the general welfare through expanded programs of research and extension to improve animal health."*

**USDA has developed five national priority areas to tightly focus NIFA and other USDA science funds on solving specific problems and demonstrating results.**

**Global Food Security and Hunger** – NIFA supports research, education and extension that will boost U.S. agricultural production and improve global capacity to meet the growing food demand. NIFA also fosters innovation in fighting hunger by addressing food security for vulnerable populations.

**Climate Change** - NIFA supports projects that generate knowledge to develop an agriculture system that maintains high productivity in the face of climate changes and reduce greenhouse gas emissions. This will help producers to plan and make decisions in adapting to changing environments, sustaining economic vitality, and taking advantage of emerging economic opportunities offered by climate change mitigation technologies.

**Sustainable Energy** - NIFA contributes to the President’s goal of energy independence by supporting science to develop biomass used for biofuels, design optimum forest products and crops for bioenergy production, and produce value-added bio-based industrial products.

**Childhood Obesity** - NIFA supports research to identify effective measures that guide individuals and families to make informed, science-based decisions that will reduce child obesity and improve health.

**Food Safety** - NIFA supports research that results to reduce the incidence of food-borne illnesses and provides a safer food supply by: eliminating causes of microbial contamination and antimicrobial resistance; educating consumer and food safety professionals; and developing food processing technologies to improve food safety.

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#### **Areas of Identified Research Need for Wisconsin**

Within these national goals, states are asked to draw on stakeholder input to help direct use of formula funding. In Wisconsin, faculty meet regularly with a number of college and departmental advisory groups, commodity organizations, state agencies, consumer groups, and private citizens. Input from these stakeholders, and from those performing the research, is beneficial to assist in highlighting areas of research need. Department chairs are asked to provide a small number of research topics from each unit of CALS for use in Hatch and McIntire-Stennis calls for proposals. The following is a compilation of common themes reviewed and updated annually. Note: Research proposals from all topic areas will be considered, and ranked according to the criteria provided in this call for proposals. The list below is provided to draw attention to needs currently of interest within the state.

- Mechanisms of pest and pathogen resistance and safe and effective control, with minimum effects on environmental quality and human health.
- Effects of change in global climate, population pressures, or public policy on agricultural production, environmental resources, ecosystem management, and future land uses.
- Identification of socioeconomic or other forces that shape the viability of Wisconsin industries and employment including agriculture, bio-based industry, forestry, wildlife management, recreation, and other land uses.
- Research on food safety, nutritional health, environmental protection, and biotechnology and on providing information on dietary choices, lifestyle and community decisions.
- Sustainable agricultural and forestry production and processing systems that provide improved food safety and security, environmental protection, economically viable communities, protection of public goods, and human well-being. This need requires an understanding of basic life processes and model plant/animal systems in order to manage biotic systems for human use.
- Research and development related to agricultural processes with the potential to enhance the productivity and quality of livestock and food and bio-fuel crops in a sustainable manner.

***Ideally, your proposal should address one of the priorities for Wisconsin in addition to one of the Five National Priority areas. Your proposal must address at least one of the Five National Priority areas.***

## **Nature of the Proposal Review for Hatch and McIntire-Stennis Proposals**

### **The Faculty Review Panel (FRP):**

The Associate Dean for Research selects members of the FRP in consultation with the Research Advisory Committee (RAC). Two members of the FRP and ad hoc reviewers review each proposal. The two FRP members are designated as primary or secondary reviewer. The FRP members select two ad hoc reviewers. When possible, ad hoc members are CALS faculty. Ad hoc reviewers may not include CALS faculty who have a proposal under review. However, other reviewers, both on and off campus, may be appointed as needed. The selection criteria for FRP members and ad hoc reviewers are scientific excellence, appropriate disciplinary expertise, and overall balance. No member of the FRP may have a proposal being reviewed under this call. When submitting a proposal, applicants may request an individual(s) be excluded from selection as a reviewer. Conversely, applicants may also suggest individuals for consideration as reviewers.

### **For Reviewers:**

Reviewers are asked to critique and evaluate proposals in a constructive manner, identifying both strengths and weaknesses of the proposal(s) under review. Reviews should be concise and include comments addressing each of the following:

- An evaluation of the scientific significance of the objectives and alignment of project goals and funding source (appropriateness of the research problem to the Congressional Acts and NIFA's Five National Priorities). The criterion of appropriateness is equally important to scientific merit and PI record of achievement.
- A judgment of the potential for solving Wisconsin problems is a key element of the formula funding guidelines.
- An evaluation of the research team's ability to accomplish the stated objectives, and the match between these objectives and available resources. For teams with multiple investigators, please include a plan of coordination across team members.
- Multistate and integrated activity priorities.

### **Review Process:**

- Copies of the proposal are sent to two members of the Faculty Review Panel (FRP), and at least one ad hoc reviewer. Each will prepare a written review of the proposal assigned them, and rank it on a scale from excellent to unacceptable. The completed reviews are forwarded to the Research Division office and recorded anonymously upon receipt.
- Prior to a meeting of the FRP, the primary and secondary reviewer receive copies of all reviews to facilitate leading the discussion on proposals assigned them.
- At the meeting, the primary reviewer gives a brief description of the proposal, the principal investigator's background, and his or her assessment of the proposed research. The secondary reviewer will provide his/her evaluation and raise any points that may have been overlooked. In areas where the FRP has insufficient expertise in the proposed research, an ad hoc reviewer may be selected as a primary or secondary discussant. The primary reviewer provides remarks from ad hoc reviewers, and clarifies any confusing issues.
- After the FRP discusses each proposal, it is ranked for funding. This process provides for ranking reconsideration as other proposals are reviewed and ranked. Therefore, an inappropriately negative external review will *not* condemn a given proposal. After placement of all proposals, FRP members will review the compiled list to modify any inappropriate placements. The prioritized list is then submitted to the Associate Dean for Research. Approximately 50% of proposals are anticipated to receive funding approval.
- The primary reviewer on each proposal prepares a summary of all reviewer comments and FRP discussion. These materials, along with individual reviews and the summary, will be forwarded to applicants.

## Proposal Submission Information/Format

The Faculty Review Panel, comprised of individuals with varying scientific backgrounds and expertise, reviews all proposals. Despite efforts to secure experts as outside reviewers, the panel discussion remains crucial to the ranking of proposals as outside experts may not always be available. Please include the following with your proposal:

- A scientific summary providing the necessary perspective for trained scientists who may not be experts in your area. This is essential for the panel to understand your proposed work. This summary should also identify the NIFA priority your work relates to and include a brief justification.
- Justification of the proposed research for Hatch/Hatch Multistate/McIntire-Stennis funding must show the applicability to the specific topics set forth by Congress. Failure to provide this information will jeopardize funding even with sound scientific reviews.

**Submission Deadline:** Friday, September 9, 2011, by 4:30 p.m. to WAES Office via WISPER.

*Proposals received after 4:30pm on September 9, 2011 will not be accepted*

**Copies Required:** 1 full electronic copy with all approved signatures included through the WISPER system.

**NOTE: FUNDING IS CONTINGENT ON FEDERAL BUDGET RESOLUTION**

### Proposal Format:

The following format is intended to expedite proposal preparation and review, while providing information essential for identifying the best proposals. Principal investigators are urged to conform to format limits: reviewers will not be expected to read extended sections, addenda, or unpaginated sections. With rare exceptions, principal investigators will not be requested to submit revised proposals as part of the overall review process.

#### 1. Cover page and 200-word summary (1 page):

The proposal cover page must provide the following basic information: informative title, sponsor type (Hatch, McIntire-Stennis, Animal Health), names of the participating faculty; requested funding amount for each year, and a 200-word summary of the work undertaken. This cover page is distributed to all Faculty Review Panel members as part of the review process. This page is available for completion, with the budget worksheets (see below), on our website:

<http://www.cals.wisc.edu/waes>

#### 2. Budget worksheets:

A budget worksheet must be completed for each year of funding requested, along with a cumulative summary integrated into the cover page. The Excel workbook is available on-line at:

<http://www.cals.wisc.edu/waes>

- The standardized Excel form is designed to expedite preparation of yearly budgets. **Begin by entering data for Year 1.** The project title, principal investigator, etc information on the Year 1 budget worksheet will automatically carry forward onto subsequent years, and the cover page. Category totals on each year will also carry forward onto the cover page. Requests less than 4 years should leave unused years blank. These Excel documents are required in your submission.
- With the development of the Excel documents, we have attempted to simplify the budget submission process. The RA stipend and fringe rates on the forms are fixed for all years. You should use no more than a 4% yearly increase projection for all other types of personnel requested. The fringe rates should remain at the current rate across all years. No tuition remission is allowed for these budgets.

**NOTE:** Proposals should be prepared in a 12-point font, standard 1 inch margins, and not exceed 6 pages.

**3. Title Page (1 page)**

Include the following:

Project title – The title should reflect the objectives and scope of the project.

Personnel – All PIs and Co-PIs should be listed along with their department.

**4. Background page (1 page)**

A single page should be devoted to a description of the problem, and other relevant issues for a reviewer to understand the approaches utilized.

**5. Justification (2 pages)**

*Two separate, one-page, justifications should be supplied:*

**Research:** The research justification should specify the aims of the project in terms of growth in new knowledge and project applicability for Hatch/McIntire-Stennis funding. Applicants should be certain to link the proposed work to the congressional language and Five National Priorities within this justification. Basic research is fundable under these guidelines, but not every project of high scientific merit will meet the criteria. *The authors bear the responsibility for convincing reviewers their project should be funded under these programs.* Multistate and integrated activity should be detailed if applicable. These areas will be considered in the review process.

The following must be included in your research justification:

1. The importance of the problem to agriculture and rural life of the State or region.
2. Reasons for doing the work (such as the needs the project will fill) and doing it at this time.
3. Ways in which the public welfare of scientific knowledge will be advanced.

**Budget:** The budget justification should specify the budget by category and defend the amount, type of funding, and time frame requested. The amount of support requested, coupled with justification, will be a significant factor in allocating scarce resources. Costs associated with the use of the Agricultural Research Station (ARS) facilities for your research project should be included in the justification.

**6. Proposal body (6 pages)**

Six pages maximum, including figures, should be used to detail experiments or activities to be performed.

The following must be included:

1. **Objectives:** Clear, complete, and logically arranged statements of the specific results to be achieved by the project.
2. **Procedure:** A statement of the essential working plans and methods to be used in attaining each of the stated objectives. Procedures should correspond to the objectives and follow the same order. Phases of the work to be undertaken should be designated and listed in a timeline format. Location of the work and the facilities and equipment needed and available should be indicated. Wherever appropriate, the procedure should produce data suitable for statistical analysis. The procedure should reflect careful planning and should provide flexibility for changes if they become necessary.

Methods to avoid obvious pitfalls should also be noted. A description of likely results and their interpretation/application is essential. An explanation should be provided detailing how the appropriate audience will be informed of results, and, whether that audience is other scholars, extension agents, farmers, etc. At the end of this section, include a timetable for anticipated completion of key elements. Key anticipated outcomes should be identified.

**7. Previous results (1 page):**

A predictive factor in funding decisions is prior productivity of the principal investigator. This will partly be addressed in the curriculum vitae (see #10 below), but it is also very important to determine productivity and impact with previous Formula Grant awards. The PI should, therefore, provide a clear statement of the results of his/her current or most recent Formula Grant support and include information on how that support has benefited his/her overall research program. In the case of research that focuses primarily on "new knowledge", this is best documented by the citation of publications in peer-reviewed journals that have cited the Formula Grant support in the Acknowledgments. Applied projects will also be judged by evidence of current or future impacts on society. An additional page can be used for each co-PI, if they have had recent Formula Grant support.

**8. Management plan**

For proposals with multiple investigators, include a plan for research coordination and a detailed allocation of project activities and budget items among the investigators. All investigators must sign the proposal cover page.

**9. Resubmissions**

For resubmitted proposals, indicate how previous comments were addressed in developing the revised proposal.

**10. References**

Provide a complete citation for each of the references cited in the proposal.

**11. Curriculum vitae (2 pages)**

A two-page CV for each investigator, focusing on recent publications, applications, invention disclosures, and patents, should be provided.

**12. "Other Funding" page**

The principal investigator should provide a summary of other current or pending funding. This should include PI(s), project title, funding source, dates of funding period, and direct costs per year. Where there is any conceivable overlap between these projects and the current proposal, the nature of the overlap should be explained here and justified in the appropriate justification section. Discuss the potential for future or supplemental external funding for this project.

**13. Compliance**

Approved projects require all compliance issues to be addressed with approvals for human subjects, animal care, and biological safety.

**POLICIES AND PROCEDURES - FORMULA (142) GRANTS  
HATCH, MCINTIRE-STENNIS & ANIMAL HEALTH  
(Effective FY11-12 -- 10/01/11)**

**FISCAL RESPONSIBILITY:**

Formula funded projects are subject to the provisions of the "Uniform Federal Assistance Regulations 7 CFR Part 3015" and "OMB Circular A-21". Copies of these documents are available upon request to the Research Division Office. In addition, formula funding must be spent in accordance with the rules and regulations set forth by the University of Wisconsin and by the State of Wisconsin.

Requisitions and all other forms of requests for expenditures of funds require prior approval from the WI Agricultural Experiment Station. This includes any form of direct billings such as photocopying, RARC services, etc. Please send all requisitions and requests for expenditures to [waes@cals.wisc.edu](mailto:waes@cals.wisc.edu).

**USE OF ASSIGNED FUNDS TO A PROJECT:**

Principal investigators should use formula funding assigned to their approved projects for necessary direct costs related to the project and as outlined in the approved budget sheet they receive from the Research Division. Dean's approval is required for any request to purchase capital equipment, request to purchase computer/printer and non-consumable related items, and request to exceed copy costs, or research supplies should be sent to [waes@cals.wisc.edu](mailto:waes@cals.wisc.edu).

## Formula Grants Policies

As of June 2011

| COST                                  | POLICY  | COMMENT   |
|---------------------------------------|---|---|
| <b>Appointments</b>                   | <ul style="list-style-type: none"> <li>• Project Assistants, Post-Doc Appointments, and Technicians are <i>typically unallowable</i> on Formula grants.</li> <li>• Faculty/Academic Staff appointments are <i>unallowable</i> on Animal Health grants.</li> </ul> | If an individual is being paid on a Formula Funded project, the individual <b>MUST</b> be working on the project. Justifications may be requested at any time.  |
| <b>Binding (Thesis)</b>               | <ul style="list-style-type: none"> <li>• <i>Unallowable Cost</i></li> </ul>   |   |
| <b>Books</b>                          | <ul style="list-style-type: none"> <li>• <i>Typically unallowable Cost</i></li> </ul>   | Requests to purchase research books will require a strong justification. Requests with justifications must be submitted to <a href="mailto:waes@cals.wisc.edu">waes@cals.wisc.edu</a> for prior approval and include identification of matching funds for the purchase (amount and Fund-Project number of matching funds must be provided).                     |
| <b>Capital Equipment</b>              | <ul style="list-style-type: none"> <li>• <i>Prior Approval Necessary</i> from WAES</li> <li>• See RSP definition of "<a href="#">equipment</a>"</li> <li>• Equipment purchases in the last year of a project are <i>unallowable</i>.</li> </ul>                   | Requests should be sent by email to <a href="mailto:waes@cals.wisc.edu">waes@cals.wisc.edu</a> . The email should include a request to rebudget with justification and identification of matching funds for the purchase (amount and fund-account number of matching funds must be provided). Equipment purchases cannot be made in the last year of a project. |
| <b>Carryover of Unobligated Funds</b> | <ul style="list-style-type: none"> <li>• Carryover of unobligated funds <i>unallowable</i> for Formula Grant awards.</li> </ul>   |   |
| <b>Change in Scope/Objectives</b>     | <ul style="list-style-type: none"> <li>• <i>Prior Approval Necessary</i> from USDA</li> </ul>   | Letter must be initiated by PI, signed by PI and department chair, and submitted to <a href="mailto:waes@cals.wisc.edu">waes@cals.wisc.edu</a> .  |
| <b>Change in PI</b>                   | <ul style="list-style-type: none"> <li>• <i>Prior Approval Necessary</i> from USDA</li> </ul>   | Letter must be initiated by PI, have PI, and department chair signature, and submitted to <a href="mailto:waes@cals.wisc.edu">waes@cals.wisc.edu</a> .  |

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|---|--|---|
| <b>Computer Access Charges</b>              | <ul style="list-style-type: none"> <li>• <i>Unallowable Cost</i></li> </ul>  | Access charges for daily operations are <i>unallowable</i> . Exceptions must be reviewed and approved by <a href="mailto:waes@cals.wisc.edu">waes@cals.wisc.edu</a> or designee prior to incurring the charge.  |
| <b>Computer/Printer Purchases</b>           | <ul style="list-style-type: none"> <li>• One computer and printer over the life of a project if required to conduct the research is <i>allowable</i>.</li> <li>• Formula funding can be used to fund up to one-half the purchase price.</li> <li>• Computer/printer purchases are <i>unallowable</i> in the last year of a project.</li> </ul> | <b>The WAES must approve all requests to use Formula funding to purchase computers/printers.</b> The request should be sent by email to <a href="mailto:waes@cals.wisc.edu">waes@cals.wisc.edu</a> . The email should include a justification of need, a request to rebudget if required, and identification of matching funds for the purchase (amount and Fund-Project number of matching funds must be provided). Upon approval, a requisition can be processed.   |
| <b>Computer/Printer Accessory Purchases</b> | <ul style="list-style-type: none"> <li>• <i>Unallowable Cost</i></li> </ul>  | If these items are <b>crucial</b> to carry out the project, a request with strong justification should be sent by email to <a href="mailto:waes@cals.wisc.edu">waes@cals.wisc.edu</a> . A general list of these types of accessories are, but not limited to: software, memory (RAM), hard drives, DVD burners, and projectors. Projector requests must provide identification of matching funds for the purchase.  |
| <b>Copy Costs</b>                           | <ul style="list-style-type: none"> <li>• A maximum of \$400/year is <i>allowable</i> for research related copy costs (debit cards, copy chargebacks) unless survey costs were included and approved in the original proposal.</li> </ul>   | If there is a need to exceed the maximum, a request and justification must be submitted to <a href="mailto:waes@cals.wisc.edu">waes@cals.wisc.edu</a> for approval prior to exceeding the maximum.  |
| <b>Equipment under \$5,000</b>              | <ul style="list-style-type: none"> <li>• <i>Prior Approval Necessary</i> from WAES</li> <li>• See RSP definition of “<a href="#">equipment</a>”</li> <li>• Equipment purchases in the last year of a project are <i>unallowable</i>.</li> </ul>  | The request should be sent by email to <a href="mailto:waes@cals.wisc.edu">waes@cals.wisc.edu</a> . The email should include identification of matching funds for the purchase (amount and fund-account number of matching funds must be provided).   |
| <b>Publication/Distribution Costs</b>       | <ul style="list-style-type: none"> <li>• Publication and distribution costs that are a direct result of a project are <i>allowable</i>.</li> </ul>   | Expenses associated with providing editorial assistance are considered legitimate publication costs. See “Formula Grants FAQs” for required USDA support acknowledgement and disclaimer to be used in all publications  |
| <b>Purchasing Card/Direct Charges</b>       | <ul style="list-style-type: none"> <li>• Purchasing card and direct charges are <i>allowable</i> <b>if</b> detailed documentation can be provided which includes dates of service, item description, and cost.</li> </ul>  | Submit to <a href="mailto:waes@cals.wisc.edu">waes@cals.wisc.edu</a> , for review and approval if allowable.  |
| <b>Research Assistant Appointments</b>      | <ul style="list-style-type: none"> <li>• Up to one 50% Research Assistant per month allowed</li> <li>• <i>Prior Approval Necessary</i> for deviations</li> </ul>   | Unused RA salary savings and associated fringe benefits will be pulled back to the Research Division’s administrative control on a quarterly basis. Exceptions must be made in writing to <a href="mailto:waes@cals.wisc.edu">waes@cals.wisc.edu</a> with justification by the principal investigator. Expenditures may not be made until approved by the Research Division. Requests to rebudget the RA salary to supplies, student hourly, and/or travel will only be granted for 2 months of a year’s time. The associated fringe benefits will be pulled back to the WAES and will not be rebudgeted to another category when moving RA salary. |

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|   |   | Formula Grant programs allow RA salaries up to 50% of the RA appointment. For FY2009, the allowable monthly limit requires written approval from WAES <b>prior</b> to the deviation.   |
| <b>Research Related Supplies</b>            | <ul style="list-style-type: none"> <li>General office supplies are <i>unallowable</i> expenses (unless related to direct research costs approved in the original proposal).</li> </ul>  | If there is a need to purchase research-related supplies, a request and justification must be submitted to <a href="mailto:waes@cals.wisc.edu">waes@cals.wisc.edu</a> for approval prior to exceeding the maximum.   |
| <b>Subscriptions/Memberships</b>            | <ul style="list-style-type: none"> <li><i>Unallowable</i></li> <li>Subscription costs directly related to the research when the subscription provides datasets available only to subscribers may be allowed.</li> <li>Professional memberships are not allowed unless they are coupled with a subscription that provides datasets and which does not allow a subscription purchase without membership.</li> </ul> | Requests with justifications for subscriptions and memberships must be submitted to <a href="mailto:waes@cals.wisc.edu">waes@cals.wisc.edu</a> for review and approval if allowable.   |
| <b>Telephone/Communications Charges</b>     | <ul style="list-style-type: none"> <li>ONLY telephone charges relating to the Formula Grant are <i>allowable</i>.</li> <li>All other types of local telephone and yearly line rental cost are <i>unallowable</i> and should be treated as an indirect cost (overhead, F&amp;A), per OMB Circular A-21 guideline F.6.b.(3) and J.18.a (4).</li> </ul>  | Allocated telephone charges must be processed via a non-salary payment transfer request and a copy of the phone bill with the telephone calls relating to the project highlighted. The transfer form and attachments must be submitted for approval/processing.                      |
| <b>Travel</b>                               | <ul style="list-style-type: none"> <li>Travel for data collection is <i>allowable</i>, but <i>prior approval necessary</i>.</li> <li>Multi-state travel is <i>allowable</i> for appointed WI representative.</li> </ul>   | Justification of the travel will be required when submitting receipts for review and approval. Substitute WI representative for Multi-state travel requires prior written approval by the WAES. Please send requests to <a href="mailto:waes@cals.wisc.edu">waes@cals.wisc.edu</a> . |
| <b>Tuition Remission</b>                    | <ul style="list-style-type: none"> <li><i>Unallowable Cost</i></li> </ul>   |  |
| <b>Vehicle Maintenance and Repair Costs</b> | <ul style="list-style-type: none"> <li><i>Usually unallowable Cost</i></li> </ul>   | Requests for vehicle maintenance and repair cost will require a strong justification. Requests with justifications must be submitted to <a href="mailto:waes@cals.wisc.edu">waes@cals.wisc.edu</a> for prior approval.   |

## **APPENDIX A**

|                        | <b>Project Number and Title</b>   | <b>Project End</b> |
|------------------------|---|--------------------|
| <a href="#">NC007</a>  | Conservation, Management, Enhancement and Utilization of Plant Genetic Resources  | 09/30/2012         |
| <a href="#">NC100</a>  | Regional Research Coordination, North Central Region  | 09/30/2029         |
| <a href="#">NC140</a>  | IMPROVING ECONOMIC AND ENVIRONMENTAL SUSTAINABILITY IN TREE-FRUIT PRODUCTION THROUGH CHANGES IN ROOTSTOCK USE                             | 09/30/2012         |
| <a href="#">NC170</a>  | Personal Protective Technologies for Current and Emerging Occupational Hazards  | 09/30/2012         |
| <a href="#">NC205</a>  | Ecology and Management of European Corn Borer and Other Lepidopteran Pests of Corn  | 09/30/2015         |
| <a href="#">NC213</a>  | Marketing and Delivery of Quality Grains and BioProcess Coproducts  | 09/30/2013         |
| <a href="#">NC229</a>  | Detection and Control of Porcine Reproductive and Respiratory Syndrome Virus and Emerging Viral Diseases of Swine                         | 09/30/2014         |
| <a href="#">NC1023</a> | Engineering for food safety and quality   | 09/30/2015         |
| <a href="#">NC1029</a> | Applied Animal Behavior and Welfare (NCR131)  | 09/30/2016         |
| <a href="#">NC1030</a> | Family Firms and Policy in Times of Disruption (NC1030)   | 10/01/2016         |
| <a href="#">NC1034</a> | Impact Analyses and Decision Strategies for Agricultural Research (NC1003)  | 09/30/2016         |
| <a href="#">NC1037</a> | Genetic and Functional Genomic Approaches to Improve Production and Quality of Pork   | 09/30/2012         |
| <a href="#">NC1038</a> | Methods to Increase Reproductive Efficiency in Cattle (NC1006)  | 10/01/2012         |
| <a href="#">NC1039</a> | N-3 polyunsaturated fatty acids and human health and disease  | 09/30/2012         |
| <a href="#">NC1040</a> | Metabolic Relationships in Supply of Nutrients for Lactating Cows (NC-1009)   | 09/30/2012         |
| <a href="#">NC1041</a> | Enteric Diseases of Swine and Cattle: Prevention, Control and Food Safety   | 09/30/2012         |
| <a href="#">NC1042</a> | Management Systems to Improve the Economic and Environmental Sustainability of Dairy Enterprises (Rev. NC-1119)                           | 09/30/2012         |
| <a href="#">NC1100</a> | Enhancing Rural Development Technology Assessment and Adoption Through Land Grant Partnerships  | 09/30/2015         |
| <a href="#">NC1168</a> | Regulation of Photosynthetic Processes (Rev. NC-1142)   | 09/30/2012         |
| <a href="#">NC1169</a> | EFNEP Related Research, Program Evaluation and Outreach   | 09/30/2013         |
| <a href="#">NC1170</a> | Advanced Technologies for the Genetic Improvement of Poultry (was NC-168)   | 09/30/2013         |
| <a href="#">NC1171</a> | Interactions of individual, family, community, and policy contexts on the mental and physical health of diverse rural low-income families | 09/30/2013         |
| <a href="#">NC1172</a> | The Complex Nature of Saving: Psychological and Economic Factors  | 09/30/2013         |
| <a href="#">NC1173</a> | Sustainable Solutions to Problems Affecting Bee Health  | 09/30/2014         |

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|-------------------------|--|------------|
| <a href="#">NC1177</a>  | Agricultural and Rural Finance Markets in Transition (NC1014, NC221, NCT-194)  | 09/30/2014 |
| <a href="#">NC1178</a>  | Impacts of Crop Residue Removal for Biofuel on Soils (formerly NC1017)   | 09/30/2014 |
| <a href="#">NC1179</a>  | Food, Feed, Fuel, and Fiber: Security Under a Changing Climate (NC_1018 Renewal)   | 09/30/2014 |
| <a href="#">NC1180</a>  | Control of Emerging and Re-emerging Poultry Respiratory Diseases in the United States  | 09/30/2014 |
| <a href="#">NC1181</a>  | Sustaining Forage-based Beef Cattle Production in a Bioenergy Environment  | 09/30/2014 |
| <a href="#">NC1182</a>  | Nitrogen Cycling, Loading, and Use Efficiency in Forage-Based Livestock Production Systems (formerly NCT-196 and NC-189)                               | 09/30/2014 |
| <a href="#">NC1183</a>  | Mycotoxins: Biosecurity, Food Safety and Biofuels Byproducts (NC129, NC1025)   | 09/30/2015 |
| <a href="#">NC1184</a>  | Molecular Mechanisms Regulating Skeletal Muscle Growth and Differentiation   | 09/30/2015 |
| <a href="#">NC1186</a>  | Water Management and Quality for Ornamental Crop Production and Health   | 09/30/2015 |
| <a href="#">NC1187</a>  | The Chemical and Physical Nature of Particulate Matter Affecting Air, Water and Soil Quality. (NCR174)   | 09/30/2015 |
| <a href="#">NC1189</a>  | Understanding the Ecological and Social Constraints to Achieving Sustainable Fisheries Resource Policy and Management                                  | 09/30/2016 |
| <a href="#">NC1195</a>  | Enhancing nitrogen utilization in corn based cropping systems to increase yield, improve profitability and minimize environmental impacts (NC1032/218) | 09/30/2016 |
| <a href="#">NCAC001</a> | Crop and Soil Research   | 09/30/2020 |
| <a href="#">NCAC002</a> | Animal Health Advisory Committee   | 09/30/2020 |
| <a href="#">NCAC004</a> | Horticultural Crops  | 09/30/2020 |
| <a href="#">NCAC005</a> | Human Sciences   | 09/30/2020 |
| <a href="#">NCAC006</a> | Livestock Production   | 09/30/2020 |
| <a href="#">NCAC010</a> | Forestry and Forest Products   | 09/30/2020 |
| <a href="#">NCAC012</a> | Agricultural Economics   | 09/30/2020 |
| <a href="#">NCAC013</a> | Rural Sociology  | 09/30/2020 |
| <a href="#">NCAC014</a> | Plant Pathology  | 09/30/2020 |
| <a href="#">NCAC015</a> | Entomology and Economic Zoology  | 09/30/2020 |
| <a href="#">NCAC016</a> | Biological and Agricultural Engineering  | 09/30/2020 |
| <a href="#">NCAC022</a> | Food Science and Human Nutrition   | 09/30/2020 |
| <a href="#">NCAC023</a> | Fisheries and Wildlife   | 09/30/2020 |
| <a href="#">NCAC024</a> | Agricultural Education Research  | 09/30/2020 |
| <a href="#">NCCC009</a> | MWPS: Research and Extension Educational Materials   | 09/30/2014 |
| <a href="#">NCCC031</a> | Ecophysiological Aspects of Forage Management  | 09/30/2015 |
| <a href="#">NCCC042</a> | Committee on Swine Nutrition   | 09/30/2014 |
| <a href="#">NCCC046</a> | Development, Optimization, and Delivery of Management Strategies for Corn Rootworms and Other Below-ground Insect Pests of Maize                       | 09/30/2016 |
| <a href="#">NCCC052</a> | Family Economics   | 09/30/2015 |

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| <a href="#">NCCC065</a>  | Indicators of Social Change in the Marketplace: Producers, Retailers and Consumers   | 09/30/2016 |
| <a href="#">NCCC084</a>  | Potato Breeding and Genetics Technical Committee   | 09/30/2012 |
| <a href="#">NCCC134</a>  | Applied Commodity Price Analysis, Forecasting, and Market Risk Management (NCDC-198 and NCR-134)   | 09/30/2015 |
| <a href="#">NCCC167</a>  | Corn Breeding Research   | 09/30/2016 |
| <a href="#">NCCC170</a>  | Research Advances in Agricultural Statistics   | 09/30/2016 |
| <a href="#">NCCC204</a>  | The Interface of Molecular and Quantitative Genetics in Plant and Animal Breeding  | 09/30/2012 |
| <a href="#">NCCC207</a>  | Biochemistry and Genetics of Plant-Fungal Interactions   | 09/30/2013 |
| <a href="#">NCCC208</a>  | Nutrition and Management of Feedlot Cattle to Optimize Performance, Carcass Value and Environmental Compatibility (NCT192)                       | 09/30/2013 |
| <a href="#">NCCC209</a>  | Agricultural Bioethics   | 09/30/2013 |
| <a href="#">NCCC210</a>  | Regulation of Adipose Tissue Accretion in Meat-Producing Animals (NCR97)   | 09/30/2014 |
| <a href="#">NCCC211</a>  | Cover crops to improve environmental quality in crop and biofuel production systems in the Great Lakes and Upper Mississippi basins              | 09/30/2015 |
| <a href="#">NCDC220</a>  | Biology, Etiology, and Management of Dollar Spot in Turfgrasses  | 09/30/2012 |
| <a href="#">NCDC222</a>  | Adapting Agriculture to Climate Variability  | 09/30/2012 |
| <a href="#">NCDC223</a>  | Advancing Research, Education, and Policy to Support Renewing an Agriculture of the Middle   | 08/06/2012 |
| <a href="#">NCDC224</a>  | Building Capacity in Issues Management in the Land Grant System  | 08/24/2012 |
| <a href="#">NCDC225</a>  | Coordination of Joint Work Products for Land Grant University Technology Managers Most Closely Associated with Agriculture and the Life Sciences | 09/30/2012 |
| <a href="#">NCDC226</a>  | NCDC Proposal Project: EFFECTS OF CHANGING CLIMATIC CONDITIONS ON BEEF CATTLE  | 01/02/2013 |
| <a href="#">NCERA003</a> | Soil and Landscape Assessment, Function and Interpretation   | 09/30/2014 |
| <a href="#">NCERA059</a> | Soil Organic Matter: Formation, Function and Management  | 09/30/2016 |
| <a href="#">NCERA103</a> | Specialized Soil Amendments and Products, Growth Stimulants and Soil Fertility Management Programs (NCERA-103)                                   | 09/30/2012 |
| <a href="#">NCERA184</a> | Management of Small Grain Diseases   | 09/30/2012 |
| <a href="#">NCERA193</a> | NCR-193: IPM Strategies for Arthropod Pests and Diseases in Nurseries and Landscapes   | 09/30/2012 |
| <a href="#">NCERA197</a> | Agricultural Safety and Health Research and Extension  | 09/30/2015 |
| <a href="#">NCERA199</a> | Implementation and Strategies for National Beef Cattle Genetic Evaluation (new project)  | 09/30/2012 |
| <a href="#">NCERA210</a> | Improving the management and effectiveness of cooperatively owned business organizations   | 09/30/2013 |
| <a href="#">NCERA211</a> | Potato Research and Extension Program (was NCT-190)  | 09/30/2013 |
| <a href="#">NCERA212</a> | Soybean Diseases   | 09/30/2014 |
| <a href="#">NCERA213</a> | Migration and Dispersal of Agriculturally Important Biota (NCR-148)  | 09/30/2014 |
| <a href="#">NCERA214</a> | Increased Efficiency of Sheep Production   | 09/30/2014 |
| <a href="#">NCERA215</a> | Contribution of 4-H Participation to the Development of Social   | 10/01/2014 |

## Capital Within Communities

|                          |  |            |
|--------------------------|--|------------|
| <a href="#">NCERA216</a> | Latinos and Immigrants in Midwestern Communities   | 09/30/2014 |
| <a href="#">NCERA217</a> | Drainage design and management practices to improve water quality  | 09/30/2014 |
| <a href="#">NCERA218</a> | Beef-Cow-Calf Nutrition and Management Committee (new project)   | 09/30/2016 |
| <a href="#">NCERA219</a> | Swine Production Management to Enhance Animal Welfare  | 09/30/2016 |
| <a href="#">NCERA220</a> | Biological Control of Arthropods and Weeds   | 09/30/2016 |
| <a href="#">NE009</a>    | Conservation and Utilization of Plant Genetic Resources  | 09/30/2013 |
| <a href="#">NE059</a>    | Multistate Research Coordination Northeastern Region   | 09/30/2029 |
| <a href="#">NE1010</a>   | Breeding and Genetics of Forage Crops to Improve Productivity, Quality, and Industrial Uses  | 09/30/2017 |
| <a href="#">NE1020</a>   | Multi-state Evaluation of Winegrape Cultivars and Clones   | 09/30/2017 |
| <a href="#">NE1027</a>   | Ovarian Influences on Embryonic Survival in Ruminants  | 09/30/2012 |
| <a href="#">NE1028</a>   | Mastitis Resistance to Enhance Dairy Food Safety   | 09/30/2012 |
| <a href="#">NE1029</a>   | Rural Change: Markets, Governance and Quality of Life  | 09/30/2012 |
| <a href="#">NE1030</a>   | Characterization and Mechanisms of Plant Responses to Ozone in the U.S.  | 09/30/2012 |
| <a href="#">NE1031</a>   | Collaborative Potato Breeding and Variety Development Activities to Enhance Farm Sustainability in the Eastern US  | 09/30/2012 |
| <a href="#">NE1032</a>   | Biological Control of Arthropod Pests and Weeds  | 09/30/2013 |
| <a href="#">NE1033</a>   | Biological Improvement of Chestnut through Technologies that Address Management of the Species, its Pathogens and Pests  | 09/30/2013 |
| <a href="#">NE1034</a>   | Genetic Bases for Resistance and Immunity to Avian Diseases  | 09/30/2013 |
| <a href="#">NE1035</a>   | Commercial Greenhouse Production: Component and System Development   | 09/30/2013 |
| <a href="#">NE1036</a>   | Postharvest Biology of Fruits  | 09/30/2013 |
| <a href="#">NE1037</a>   | Wood Utilization Research : Biofuels, Bioproducts, Hybrid Biomaterials Composites Production, and Traditional Forest Products                                    | 09/30/2014 |
| <a href="#">NE1038</a>   | Hydropedology: Genesis, Properties, and Distribution of Hydromorphic Soils   | 09/30/2014 |
| <a href="#">NE1039</a>   | Changing the Health Trajectory for Older Adults through Effective Diet and Activity Modifications  | 09/30/2014 |
| <a href="#">NE1040</a>   | Plant-Parasitic Nematode Management as a Component of Sustainable Soil Health Programs in Horticultural and Field Crop Production Systems                        | 09/30/2016 |
| <a href="#">NE1041</a>   | Environmental Impacts of Equine Operations   | 09/30/2014 |
| <a href="#">NE1042</a>   | Optimization of Poultry Welfare and Production Systems for the 21st Century  | 09/30/2014 |
| <a href="#">NE1043</a>   | Biology, Ecology & Management of Emerging Disease Vectors  | 09/30/2014 |
| <a href="#">NE1044</a>   | Whole farm dairy and beef systems: gaseous emissions, P management, organic production, and pasture based production   | 10/01/2015 |
| <a href="#">NE1045</a>   | Design, Assessment, and Management of Onsite Wastewater Treatment Systems: Addressing the Challenges of Climate Change   | 09/30/2015 |
| <a href="#">NE1046</a>   | Management of Annual Bluegrass on Golf Courses: Improved Practices for Maintenance, Pest Control, and Viable Techniques for Transition to More Desirable Grasses | 09/30/2016 |

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|---------------------------|--|------------|
| <a href="#">NEAC002</a>   | Animal Science Advisory Committee  | 09/30/2016 |
| <a href="#">NECC029</a>   | Northeastern Corn Improvement Conference   | 09/30/2013 |
| <a href="#">NECC1011</a>  | Balancing Natural Resource Recreation Management, Human Well-Being, and Community Resilience                                 | 09/30/2013 |
| <a href="#">NECC1012</a>  | Northeast Coordinating Committee on Soil Testing   | 09/30/2013 |
| <a href="#">NEERA1002</a> | Adaptive Management for Improved Nutrient Management   | 09/30/2014 |
| <a href="#">NEERA1003</a> | Northeast Pasture Consortium   | 09/30/2016 |
| <a href="#">NRSP003</a>   | The National Atmospheric Deposition Program (NADP)   | 09/30/2014 |
| <a href="#">NRSP004</a>   | Enabling Pesticide Registrations for Specialty Crops and Minor Uses  | 09/30/2015 |
| <a href="#">NRSP006</a>   | The US Potato Genebank: Acquisition, Classification, Preservation, Evaluation and Distribution of Potato (Solanum) Germplasm | 09/30/2015 |
| <a href="#">NRSP007</a>   | A National Agricultural Program for Minor Use Animal Drugs   | 09/30/2014 |
| <a href="#">NRSP008</a>   | National Animal Genome Research Program  | 09/30/2013 |
| <a href="#">NRSP009</a>   | National Animal Nutrition Program  | 09/30/2015 |
| <a href="#">S009</a>      | Plant Genetic Resources Conservation and Utilization (S-009)   | 09/30/2013 |
| <a href="#">S065</a>      | Multistate Research Coordination, Southern Region  | 09/30/2029 |
| <a href="#">S1025</a>     | Systems for Controlling Air Pollutant Emissions and Indoor Environments of Poultry, Swine, and Dairy Facilities              | 09/30/2012 |
| <a href="#">S1026</a>     | Textile Materials and Technologies Addressing Energy, Health and Other National Security Issues                              | 09/30/2012 |
| <a href="#">S1027</a>     | The Poultry Food System: A Farm to Table Model   | 09/30/2012 |
| <a href="#">S1028</a>     | Ecological and genetic diversity of soilborne pathogens and indigenous microflora  | 09/30/2012 |
| <a href="#">S1030</a>     | Flies Impacting Livestock, Poultry and Food Safety   | 09/30/2012 |
| <a href="#">S1031</a>     | Improvement and Sustainability of Channel-Blue Hybrid Catfish Embryo Production and Performance                              | 09/30/2012 |
| <a href="#">S1032</a>     | Improving the Sustainability of Livestock and Poultry Production in the United States (S1000)                                | 09/30/2012 |
| <a href="#">S1033</a>     | Control of Food-Borne Pathogens in Pre- and Post-Harvest Environments  | 09/30/2012 |
| <a href="#">S1034</a>     | Biological Control of Arthropod Pests and Weeds  | 09/30/2012 |
| <a href="#">S1035</a>     | Nutritional and Management Abatement Strategies for Improvement of Poultry Air and Water Quality (from W195)                 | 09/30/2012 |
| <a href="#">S1036</a>     | Genetic improvement approaches to sustained, profitable cotton production in the United States                               | 09/30/2012 |
| <a href="#">S1037</a>     | Integrative Functional and Physiological Genomics of Poultry   | 09/30/2012 |
| <a href="#">S1038</a>     | Peanut Variety Quality Evaluation Program  | 09/30/2012 |
| <a href="#">S1039</a>     | Biology, impact, and management of soybean insect pests in soybean production systems.(S-1010)                               | 09/30/2012 |
| <a href="#">S1040</a>     | Genetic Selection and Crossbreeding to Enhance Reproduction and Survival of Dairy Cattle (S-284)                             | 09/30/2013 |
| <a href="#">S1041</a>     | The Science and Engineering for a Biobased Industry and Economy  | 09/30/2013 |
| <a href="#">S1042</a>     | Modeling for TMDL Development, and Watershed Based Planning, Management and Assessment                                       | 09/30/2013 |
| <a href="#">S1043</a>     | Economic Impacts of International Trade and Domestic Policies on   | 09/30/2013 |

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|-------------------------|--|------------|
|                         | Southern Agriculture   |            |
| <a href="#">S1044</a>   | Nutritional Systems for Swine to Increase Reproductive Efficiency  | 09/30/2013 |
| <a href="#">S1045</a>   | Genetic Considerations for Beef Cattle Production in Challenging Environments  | 09/30/2014 |
| <a href="#">S1046</a>   | Improved management of plant-parasitic nematodes through modern diagnostic tools and increased use of host resistance                          | 09/30/2014 |
| <a href="#">S1047</a>   | Enhancing Reproductive Efficiency of Poultry (S285)  | 09/30/2015 |
| <a href="#">S1048</a>   | Assessment of the Carbon Sequestration Potential of Common Agricultural Systems on Benchmark Soils Across the Southern Region Climate Gradient | 09/30/2016 |
| <a href="#">S1049</a>   | Integrated Management of Pecan Arthropod Pests in the Southern U.S.  | 09/30/2015 |
| <a href="#">S1050</a>   | Assessing the Consumer Behavior, Market Coordination and Performance of the Consumer-Oriented Fruit and Vegetable Sector                       | 09/30/2015 |
| <a href="#">S1051</a>   | Sustainable Practices, Economic Contributions, Consumer Behavior, and Labor Management in the U.S. Environmental Horticulture Industry         | 09/30/2015 |
| <a href="#">SAC001</a>  | Crops and Soils  | 09/30/2020 |
| <a href="#">SAC002</a>  | Animal Sciences  | 09/30/2020 |
| <a href="#">SAC003</a>  | Human Science Research Administration  | 09/30/2020 |
| <a href="#">SAC004</a>  | Food Science and Technology  | 09/30/2020 |
| <a href="#">SAC005</a>  | Agricultural Engineering   | 09/30/2020 |
| <a href="#">SAC006</a>  | Horticulture   | 09/30/2020 |
| <a href="#">SAC007</a>  | Agricultural Economics and Rural Sociology   | 09/30/2020 |
| <a href="#">SAC011</a>  | Plant Pathology  | 09/30/2020 |
| <a href="#">SAC012</a>  | Entomology   | 09/30/2020 |
| <a href="#">SAC013</a>  | Forestry   | 09/30/2020 |
| <a href="#">SAC014</a>  | Human Nutrition  | 09/30/2020 |
| <a href="#">SAC016</a>  | Agricultural Engineering   | 09/30/2020 |
| <a href="#">SCC013</a>  | Statisticians Group (USSES)  | 09/30/2013 |
| <a href="#">SCC033</a>  | Cooperative Variety Testing Programs   | 09/30/2015 |
| <a href="#">SCC072</a>  | Enhancing Reproductive Efficiency in Cattle (S-284)  | 09/30/2012 |
| <a href="#">SCC076</a>  | Economics and Management of Risk in Agriculture and Natural Resources  | 09/30/2014 |
| <a href="#">SCC080</a>  | Plant Breeding   | 09/30/2015 |
| <a href="#">SCC081</a>  | Sustainable Small Ruminant Production in the Southeastern U.S.   | 09/30/2012 |
| <a href="#">SCC082</a>  | Development of Plant Pathogens as Bioherbicides for Weed Control (S268)  | 09/30/2012 |
| <a href="#">SCC083</a>  | Quantifying the Linkages Among Soil Health, Organic Farming, and Food  | 09/30/2015 |
| <a href="#">SERA005</a> | Sweet Potato Collaborators Conference (IEG-14)   | 09/30/2014 |
| <a href="#">SERA006</a> | Methodology, Interpretation, and Implementation of Soil, Plant, Byproduct, and Water Analyses (SERA-IEG-6 revised)                             | 09/30/2012 |
| <a href="#">SERA008</a> | Fescue Endophyte Research and Extension (IEG-37)   | 09/30/2014 |
| <a href="#">SERA014</a> | Development and Evaluation of Bunch and Muscadine Grapes for   | 09/30/2013 |

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|                         | Fresh Market, Juice, Wine and Other Products (IEG-52)  |            |
| <a href="#">SERA015</a> | Competitiveness and Sustainability of the Southern Dairy Industry (S-217)  | 09/30/2014 |
| <a href="#">SERA017</a> | Organization to Minimize Phosphorus Losses from Agriculture  | 09/30/2013 |
| <a href="#">SERA018</a> | Rice Technical Workers Group (IEG-6/S-223)   | 09/30/2013 |
| <a href="#">SERA019</a> | The Changing Rural Health System: Education for Consumers and Providers (SERA-TF-5)  | 09/30/2013 |
| <a href="#">SERA020</a> | Southern Conservation Tillage Systems Conference   | 09/30/2014 |
| <a href="#">SERA025</a> | Turf (IEG-16)  | 09/30/2013 |
| <a href="#">SERA027</a> | Nursery Crop and Landscape Systems (IEG-63)  | 09/30/2012 |
| <a href="#">SERA035</a> | Delta Region Farm Management and Agricultural Policy Working Group   | 09/30/2015 |
| <a href="#">SERA037</a> | The New Hispanic South: Strengthening the Capacity of the Region's Land-Grant University System to Respond                     | 09/30/2012 |
| <a href="#">SERA038</a> | Biobased Energy Research and Information Exchange Committee  | 09/30/2013 |
| <a href="#">SERA039</a> | Public Policy Issues Education   | 09/30/2013 |
| <a href="#">SERA040</a> | Coordination of Winter Canola Research Programs in the Southern Region   | 09/30/2013 |
| <a href="#">SERA041</a> | Beef Cattle Production Utilizing Forages in the Southeast to Integrate Research and Extension Programs across State Boundaries | 09/30/2014 |
| <a href="#">SERA042</a> | Enhancement of Leadership Capacity in the Food Systems through Coalition Development   | 09/30/2012 |
| <a href="#">W006</a>    | Plant Genetic Resource Management, Preservation, Characterization and Utilization  | 09/30/2014 |
| <a href="#">W106</a>    | Multistate Research Coordination, Western Region   | 09/30/2029 |
| <a href="#">W505</a>    | Western States Algae Bioproducts and Biotechnology Initiative (WeSABBI)  | 09/30/2012 |
| <a href="#">W1005</a>   | An Integrated Approach to Prevention of Obesity in High Risk Families  | 09/30/2012 |
| <a href="#">W1007</a>   | Benchmark soilscapes to predict effects of climatic change in the western USA  | 09/30/2012 |
| <a href="#">W1008</a>   | Biology and Management of Iris yellow spot virus (IYSV) and Thrips in Onions   | 09/30/2012 |
| <a href="#">W1009</a>   | Integrated Systems Research and Development in Automation and Sensors for Sustainability of Specialty Crops                    | 09/30/2013 |
| <a href="#">W1010</a>   | Integrated Approach to Enhance Efficiency of Feed Utilization in Beef Production Systems                                       | 09/30/2013 |
| <a href="#">W1012</a>   | Improving ruminant use of forages in sustainable production systems for the western U.S.                                       | 09/30/2014 |
| <a href="#">W2001</a>   | Population Dynamics and Change: Aging, Ethnicity and Land Use Change in Rural Communities                                      | 09/30/2012 |
| <a href="#">W2002</a>   | Nutrient Bioavailability--Phytonutrients and Beyond  | 09/30/2013 |
| <a href="#">W2003</a>   | How to motivate parents to promote intake of calcium rich foods among early adolescents  | 09/30/2013 |
| <a href="#">W2004</a>   | Marketing, Trade, and Management of Aquaculture and Fishery Resources  | 09/30/2014 |

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| <a href="#">W2045</a>   | AGROCHEMICAL IMPACTS ON HUMAN AND ENVIRONMENTAL HEALTH: MECHANISMS AND MITIGATION  | 09/30/2015 |
| <a href="#">W2082</a>   | Evaluating the Physical and Biological Availability of Pesticides and Contaminants in Agricultural Ecosystems  | 09/30/2015 |
| <a href="#">W2122</a>   | Beneficial and Adverse Effects of Natural, Bioactive Dietary Chemicals on Human Health and Food Safety   | 09/30/2012 |
| <a href="#">W2128</a>   | Microirrigation for sustainable water use  | 09/30/2014 |
| <a href="#">W2133</a>   | Benefits and Costs of Natural Resources Policies Affecting Public and Private Lands  | 09/30/2012 |
| <a href="#">W2147</a>   | Managing Plant Microbe Interactions in Soil to Promote Sustainable Agriculture   | 09/30/2013 |
| <a href="#">W2150</a>   | Breeding Common Bean ( <i>Phaseolus vulgaris</i> L.) for Resistance to Abiotic and Biotic Stresses, Sustainable Production, and Enhanced Nutritional Value | 09/30/2015 |
| <a href="#">W2168</a>   | Environmental and Genetic Determinants of Seed Quality and Performance   | 09/30/2013 |
| <a href="#">W2170</a>   | Soil-Based Use of Residuals, Wastewater and Reclaimed Water  | 09/30/2014 |
| <a href="#">W2171</a>   | Germ Cell and Embryo Development and Manipulation for the Improvement of Livestock   | 09/30/2014 |
| <a href="#">W2177</a>   | Enhancing the Competitiveness and Value of U.S. Beef   | 09/30/2012 |
| <a href="#">W2185</a>   | Biological Control in Pest Management Systems of Plants  | 09/30/2012 |
| <a href="#">W2186</a>   | Variability, Adaptation, and Management of Nematodes Impacting Crop Production and Trade   | 09/30/2013 |
| <a href="#">W2187</a>   | Interactions of emerging threats and bark beetle-microbial dynamics in forest ecosystems   | 09/30/2014 |
| <a href="#">W2188</a>   | Characterizing Mass and Energy Transport at Different Vadose Zone Scales   | 09/30/2014 |
| <a href="#">W2190</a>   | Water Policy and Management Challenges in the West   | 09/30/2014 |
| <a href="#">WCC1003</a> | Coordination of Western Regional Extension Forestry Activities   | 09/30/2014 |
| <a href="#">WERA001</a> | Beef Cattle Breeding in the Western Region   | 09/30/2013 |
| <a href="#">WERA011</a> | Western Regional Turfgrass Research  | 09/30/2016 |
| <a href="#">WERA020</a> | Virus and Virus-Like Diseases of Fruit Trees, Small Fruits, and Grapevines.  | 09/30/2016 |
| <a href="#">WERA027</a> | Potato Variety Development   | 09/30/2015 |
| <a href="#">WERA039</a> | Coordination of Sheep and Goat Research and Education Programs for the Western States  | 09/30/2015 |
| <a href="#">WERA040</a> | Application and Utility of the Ecological Site and Condition Concept for Monitoring Rangeland Ecological Status in the Western U.S.                        | 09/30/2012 |
| <a href="#">WERA043</a> | Developing Sustainable and Organic Pest Management Programs for Western Orchard Systems  | 09/30/2013 |
| <a href="#">WERA060</a> | Management of Pesticide Resistance   | 09/30/2012 |
| <a href="#">WERA072</a> | Agribusiness Scholarship Emphasizing Competitiveness   | 09/30/2014 |
| <a href="#">WERA077</a> | Managing Invasive Weeds in Wheat   | 09/30/2014 |
| <a href="#">WERA089</a> | Potato Virus and Virus-Like Disease Management   | 09/30/2016 |
| <a href="#">WERA097</a> | DISEASES OF CEREALS  | 09/30/2015 |

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| <a href="#"><u>WERA102</u></a>  | Climate Data and Analyses for Applications in Agriculture and Natural Resources        | 09/30/2015 |
| <a href="#"><u>WERA103</u></a>  | Nutrient Management and Water Quality  | 09/30/2015 |
| <a href="#"><u>WERA1004</u></a> | Agricultural and Community Development in the American Pacific                         | 09/30/2014 |
| <a href="#"><u>WERA1005</u></a> | Addressing the Rural Development Concerns of the Rural West                            | 09/30/2015 |
| <a href="#"><u>WERA1008</u></a> | Rangelands West Partnership  | 09/30/2016 |
| <a href="#"><u>WERA1009</u></a> | Systems to Improve End-use Quality of Wheat  | 09/30/2012 |
| <a href="#"><u>WERA1010</u></a> | Reduction of Error in Rural and Agricultural Surveys                                   | 09/30/2013 |
| <a href="#"><u>WERA1011</u></a> | Sustainable Rangeland and Watershed Stewardship  | 09/30/2013 |
| <a href="#"><u>WERA1012</u></a> | Managing and Utilizing Precipitation Observations from Volunteer Networks              | 09/30/2013 |
| <a href="#"><u>WERA1013</u></a> | Intermountain Regional Evaluation and Introduction of Native Plants                    | 09/30/2013 |
| <a href="#"><u>WERA1014</u></a> | Intensive Pasture Management for Sustainable Livestock Production in the Western US    | 09/30/2013 |
| <a href="#"><u>WERA1015</u></a> | Developing the US National Virtual Herbarium   | 09/30/2014 |
| <a href="#"><u>WERA1016</u></a> | Adaptation, Quality and Management of Sustainable Cellulosic Biofuel Crops in the West | 09/30/2015 |