GRASS SEED CROPPING SYSTEMS FOR A SUSTAINABLE AGRICULTURE (GSCSSA)

Request For Research Proposals

Due 5:00 p.m. on October 19, 2009

Background

The proposed FY2010 Federal budget of the Cooperative State Research, Education, and Extension Service (USDA-CSREES) may provide funding for GSCSSA research administered jointly by Oregon State University, University of Idaho, and Washington State University. Special Grant funds (about $300,000) are proposed to be allocated to USDA-CSREES for projects that meet the program objectives. The final funding status for the Special Grant will not be known until Congress passes appropriate legislation. These funds will be used to support both new and continuing projects. In anticipation that Congress will continue funding this program in future years, multiple-year projects (not to exceed 3 years) are acceptable; but in general project funding is awarded one year at a time.

Principal Investigators who were previously funded must submit a research proposal to compete for second- or third-year funding. These research proposals must contain a progress report for activities completed. If a new proposal is linked to a previously funded, completed project, a progress report from the completed project must also be submitted. Please make it clear that the proposal is new. Principal Investigators for previously funded projects must submit a progress/ termination report even if no further funding is requested. If a project is funded, beginning in the first year of funding, the project director should make every attempt to attend the annual investigator meetings for the duration of the award to report progress on CSREES funded research and integrated activities. Reasonable travel expenses should be included as part of the project budget.

A Scientific Review Panel (composed of scientists who are not proposing to receive funds from the GSCSSA Special Grant) and the GSCSSA Industry Advisory Committee will review submitted proposals and make funding recommendations to the GSCSSA Administrative Advisory Committee. Science, priority area, multidisciplinary, and technology-transfer components will be evaluated. Final selection and funding allocations for FY2010 will be made by the Experiment Station Directors after receiving recommendations. Plans are to fund projects on their merit without a state-by-state resource allocation.

Collaborative, multidisciplinary research projects that include technology transfer will be emphasized in the program. Objectives and procedures should be described for the research as well as the technology-transfer components of the proposed project. Team-building and increased communication among scientists involved in GSCSSA research are goals of the GSCSSA program. The proposed and continuing research should be directed toward solving important regional problems affecting the Pacific Northwest grass seed industry.

FY2010 funds can be used to initiate new research or to capitalize on existing research investments by adding needed support to expedite progress. Duplication of existing research should be avoided, but proposals that enhance existing long-term research projects are eligible. Funds cannot be used for exclusive support of USDA-ARS or for private-sector research. SAES/ARS or SAES/private sector collaborative projects are encouraged.

Proposals must be prepared according to the attached format or they will be returned.

In general, individual projects will be funded at $25-$35,000 per year. Multidisciplinary projects could be considered to a maximum of $80,000. Funding for multiple-year projects will be dependent upon Special Grant funding in future years. Funds are anticipated to be available summer 2010.

Previously funded GSCSSA Special Grant Fund recipients will be asked to make a presentation of their progress at the GSCSSA annual meeting in Portland, OR on November 10, 2009. Posters are invited but not required.

Proposals should be emailed by October 19, 2009 to: ARCGrants@wsu.edu

Questions? Call Mary Lou Bricker at 509-335-7667 or email mdesros@wsu.edu

RFP FY2010 GSCSSA.doc

Program Objectives and Specific Priority Areas for GSCSSA Research Proposals

(not listed in order of importance)

- Develop sustainable grass seed cropping systems that optimize economic seed production with maximum energy and resource conservation and maintain or improve environmental quality.
  - A) Crop management, e.g., planting practices/stand establishment, crop rotation, seed certification.
  - B) Weed, insect, disease, slug, and mice control with special emphasis on effects of diuron on weed control/crop management and on slug control (biological and chemical).
  - C) Plant nutrition, e.g., fertilizer management and nutrient cycling.
  - D) Straw and stubble residue removal systems.
  - E) Air quality and dust control.
  - F) Methods to determine annual ryegrass contamination.

- Develop economic utilization of grass seed production by-products in agriculture.
  - A) Low-input composting for on-farm utilization of compost mulch.
  - B) Economic analysis of residue handling methods on- and off-farm.
  - C) Harvest methods to reduce residue.
  - D) Residue utilization and disposal opportunities such as animal feed, fermentation processes, paper, insulation, electricity generation, etc.
  - E) Endophyte relationships to alternative residue management.

- Develop maximum genetic and biological potential.
  - A) Cultivar variation in morphology, anatomy, specific plant developmental pathways, and floral processes in response to mechanical residue removal; identification of specific morphological-anatomical, biochemical, and genetic features associated with floral induction; and plant-growth models.
  - B) Germplasm from specific genetic bases that can be used to optimize seed production efficiency and minimize environmental impact of the cropping system.
  - C) Methods to determine germplasm diversity and determine cause of genetic drift.
  - D) Varietal “fingerprinting” and genetic stability.

Results of Industry Advisory Committee Session
2000 GSCSSA Annual Meeting
Updated at the 2003 Annual Meeting
Updated at the 2004 Annual Meeting

While these comments do not supercede the GSCSSA program objectives and specific priority areas, the areas listed below are of special interest to the members of the Industry Advisory Committee (IAC). The IAC members are integral to the decision-making process by which proposals are funded.

The benefits that industry leaders have received include: up-to-date information about Diuron and other fertilizers; how to maintain water quality; results of various Nitrogen trials on different grasses; better knowledge of soil properties and learning about the history of soils after 40 years of burning and grass growing. IAC members also stated that they pick up lots of information at each meeting they attend, that they can bounce ideas off each other during breaks and meals; that they receive encouragement from the group for innovative ideas and farming methods; and that having researchers and industry leaders from the three states working together gives a better picture of the entire situation.

Future directions as seen by the IAC include:

1. How can growers determine the correct nitrogen rates? Continue nitrogen testing.
2. How can growers determine what is in runoffs? Work with water quality issues.
3. Continue to look at the entire farming system, not just burning. What long-term crops are available to keep grass seed farmers in business. What kinds of alternate crops can be grown that don't require burning, EPA check-ups, and major chemical applications.
4. Continue studying pests of grasses.
5. How can farmers retrieve information gleaned from this grant and other sources? There continues to be a need, especially in Idaho and Washington, for Extension education programming to fieldmen and producers.
6. How can growers turn agricultural by-products into money?
7. Continue working on genetics to sustain or improve production in grass cropping systems.
8. Work on no-till cropping systems, i.e., rodents, insects, diseases, weeds, soil biology. environment

<u>The following continue to be areas the IAC consider to be important based on discussions at the 2004 Meeting</u>

1. Diseases and Pests
2. New Markets and Uses
3. Quality and Nutrition
4. Crop Management
5. Cultural Practices
6. Assess the Research and Education Needs Throughout Washington, Oregon, and Idaho

FORMAT FOR GSCSSA RESEARCH PROPOSALS

FONT NO SMALLER THAN 12 PT.
1" MARGINS

BODY OF THIS PROPOSAL

5 pages maximum and must include:

Title:

Duration:	Total time for project completion (no more than 3 years).
Research Area:	See attached "Program Objectives and Specific Priority Areas for GSCSSA Research Proposals."
Investigators:	Identify Principal Investigator, email, and mailing address.
Cooperators:	List individuals and be specific about the nature of their involvement in the project.
Statement of Problem:	Specifically identify problem to be addressed.
Objective(s):	Be specific for this proposal. Proposals requesting second- or third-year funding should restate the objectives outlined in the previously funded request.
Procedures:	Procecures or methodology to be applied to the proposed effort should be explicitly stated. This section should include but not necessarily be limited to: (i) a description of the proposed investigations and/or experiments in the sequence in which it is planned to carry them out; (ii) techniques to be employed, including their feasibility; (iii) kinds of results expected; (iv) means by which data will be analyzed or interpreted; (v) pitfalls which might be encountered; and (vi) limitations to proposed procedures.
Justification:	This section should include in-depth information on the following, when applicable: (i) estimates of the magnitude of the problem and its relevance to on-going State-Federal food and agricultural research programs; (ii) importance of starting the work during the current fiscal year; (iii) reasons for having the work performed by the principal investigators; and (iv) potential benefits to growers, industry, and society.

Current Work: Current unpublished institutional activities to date in the program area under which the application is being submitted should be described.

Project Timetable: List month and year when specific accomplishments are expected.

SUPPLEMENTARY PROPOSAL INFORMATION

These are not part of the 5-page proposal limit

Budget: Use the attached Excel spreadsheet, "New Budget Form for USDA," for your budget.

Provide budgets for each year of requested funding AND a cumulative budget. No indirect costs or tuition costs are allowed.

PLEASE NOTE: if your budget includes funds going to a researcher at a different university, you must provide individual budgets for each university.

Budget Justification: On a separate page(s), justify each budget line item in accordance with CSREES budget instructions. Failure to justify each budget line in every detail has resulted in a delay in receiving funding.

Subcontracts: If entering into a formal subcontractual arrangement, this must be fully explained and justified. A letter from the Authorized Organizational Representation (AOR) at the subcontracting entity must be attached stating: (i) the scope of work to be done and (ii) the amount of money the subcontractor is expecting to receive for the work.

Literature Review: A summary of pertinent publications with emphasis on their relationship to the effort being proposed should include all important and recent publications from other institutions, as well as those from your institution. The citations themselves should be accurate, complete, and written in an acceptable journal format.

Vita: Attach a one- to two-page vita for each Principal Investigator(s). Pages 3 and beyond will be eliminated.

Current & Pending Support Form: Include a Current and Pending Support Form. You may use any C&P Support Form you prefer. We have attached one for your use if you don't have one that you already like to use.

Your GSCSSA proposal in response to this RFP should be listed under "Pending" on this form.

Assurance Statement: Include an Assurance Statement form of your or your university's preference. You may use the attached Assurance Statement or one that you already like to use.

If your proposal **does** use (a) DNA/RNA, (b) vertebrate animals, or (c) humans, this form MUST be signed by the Authorized Organization Representative (AOR) at your University.

If your proposal **does not** use (a) DNA/RNA, (b) vertebrate animals, or (c) humans, this form can be signed by the Principal Investigator.

PROGRESS REPORT REQUIRED IF PREVIOUS FUNDING HAS BEEN GRANTED FROM THIS PROGRAM (see attached FY06-09 funding.doc)

This is not part of the 5-page proposal limit

Progress: Attach a progress report for previously funded projects and for new projects that are linked to a previously funded, completed project. Guidelines for preparing the progress report are attached.

UNITED STATES DEPARTMENT OF AGRICULTURE
COOPERATIVE STATE RESEARCH, EDUCATION, AND EXTENSION SERVICE

CURRENT AND PENDING SUPPORT

Instructions:

1. Record information for active and pending projects, including this proposal.
2. All current efforts to which project director(s) and other senior personnel have committed a portion of their time must be listed, whether or not salary for the person involved is included in the budgets of the various projects.
3. Provide analogous information for all proposed work which is being considered by, or which will be submitted in the near future to, other possible sponsors including other USDA programs.

NAME (List/PD #1 first)	SUPPORTING AGENCY AND AGENCY ACTIVE AWARD/PENDING PROPOSAL NUMBER	TOTAL $ AMOUNT	EFFECTIVE AND EXPIRATION DATES	% OF TIME COMMITTED	TITLE OF PROJECT
	Active:				
	Pending:				

WASHINGTON STATE UNIVERSITY: Assurance Statement(s)

Investigator:	**Phone:**
OGRD #:	**E-mail:**
Project Title:	
Sponsor:	**WSU Account #:**

Biosafety and Chemical Safety

* includes livestock pathogens and toxins

☐Project does not involve recombinant DNA/Vectors/Plasmids; Infectious/Select Agents; Carcinogens, Mutagens, or Teratogens.

Project involves:

☐Recombinant DNA/Vectors/Plasmids
☐Infectious/Select Agents*
☐Carcinogens, Mutagens, or Teratogens
☐Reserved

MUA #: (if known)

Care and Use of Animals

☐Project does not involve vertebrate animals.
☐Project involves vertebrate animals.

ASAF #: (if known)

Protection of Human Subjects

(includes the use of human tissue or bodily fluids)

☐Project does not involve human subjects.
☐Project does involve human subjects.

IRB #: (if known)

Use of Radioactive Materials or Radiation Equipment

☐Project does not involve the use of radioactive materials or radiation equipment.
☐Project does involve the use of radioactive materials or radiation equipment

Conflict of Interest

Conflict of Interest definitions and questions (www.ogrd.wsu.edu/coi_dq/)

☐Project does not involve a Conflict of Interest
☐Project does involve a Conflict of Interest

_____ _____

Signature of the Principal Investigator

Signature of the Authorized University Representative

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GSCSSA Progress Report: for awards received in FY06 and FY08
Send to ARCGrants@wsu.edu by Monday, October 19, 2009

Progress report format and content have changed. Read and follow the new progress report instructions carefully.

All researchers receiving GSCSSA funding must prepare a progress report according to this format. Please see the attached table: FY06-09 funding.doc; we need one report for each year funded. It is recognized that some researchers on the first-year projects may have limited or no results to date for this year's research. If this is the case, submit a progress report acknowledging and documenting this limited or no progress. Send an electronic copy of the progress report to ARCGrants@wsu.edu The progress reports will be used to compile the GSCSSA Progress Report booklet, which will be available at the annual meeting on November 10, 2009 in Portland, OR.

Reports will be used to judge satisfactory progress. Members of the Scientific Review Panel and the Industry Advisory Committee will read all progress reports. For continuing projects, an in-depth review accompanied by written comments will be conducted by an individual with technical expertise in the area of the project. These in-depth reviewers will be drawn from the Scientific Review Panel and other scientists as deemed necessary by the Project Coordinator. After the reports have been reviewed, the Industry Advisory Committee will discuss each report with members of the Administrative Advisory Committee. The in-depth reviewer will integrate comments from the evaluations of the Scientific Panel and Industry Advisory Committees. Written evaluation reports will be forwarded to the Program Coordinator.

The evaluation criteria for progress reports are as follows.

1. Are the original objectives being addressed; and if not, why?
2. Has reasonable research and technology transfer progress occurred during the past year?
3. Do the results show reasonable promise for providing useful and significant information to growers, government agencies, and scientists?
4. Has there been interaction with GSCSSA scientists working on similar projects?
5. Was the report prepared in a timely manner and in the requested format?

The progress reports covering GSCSSA projects are required and should be **1-2 pages** in length (***1" margins all around, font Times New Roman 12 point)***. **Send your progress report as a Word document attached to your email.** Use U.S. units in your report, except where S.I. units are better understood (e.g., soil bulk density as kg m^{-3}). This information will be used to prepare the annual CRIS report submitted to CSREES, Congress, and industry partners. The progress report format is as follows:

1. **Title:** The project title should be the same as listed on the funded proposal.
2. **Personnel:** List the project leader(s), collaborators, and support personnel assigned to the project and identify their university and/or agency affiliation.
3. **Address:** List the **lead** principal investigator mailing address, phone number, and email address.

4. **Interim or Final Report:** Indicate if your report is an interim or final report. Also show the fiscal year that funding was awarded to your project.
5. **Summary of Progress:** No more than 300 words summarizing progress to date.
6. **Outputs:** Report **outputs** completed during the reporting period that contribute to the goals and objectives of the project *(do not include publications here; they are to be reported separately below)*. Do not include findings or conclusions that have been reached; these are to be reported separately as changes in knowledge in the outcomes / impacts section. Include a description of how the results have been **disseminated** to communities of interest or how the product is being shared. If this is a **final report**, give a brief summary of the most significant outputs and dissemination activities for the entire life of the project.
    - **Outputs** are **activities, events, services,** and **products** that reach people.
    - **Activities** include conducting and analyzing experiments or surveys, assessments, facilitating, teaching, or mentoring.
    - **Events** include conferences, demonstration sites, field days, symposia, workshops, and trainings.
    - **Services** include consulting, counseling, and tutoring.
    - **Products** include: new fundamental or applied knowledge; audio or video products; curricula; data or databases; equipment or instruments; invention, patent application and/or license; models; networks and/or collaborations fostered by the project or activity; physical collections or resources such as new plant varieties, new animal germplasm, or genetic maps; software; technology, methods, or techniques; train-the-trainer manuals; website(s) with the appropriate URL(s); information, skills, and technology for individuals, communities, and programs; or students graduated in agricultural sciences.
    - **Dissemination** refers to outreach activities that were undertaken to reach intended audiences for the purpose of advancing knowledge, encouraging positive actions, or changing conditions. Include outreach activities to current and potential partners and collaborators. If educational materials and resources were distributed, describe the distribution method and the intended audience(s).
7. **Outcomes / Impact:** Describe how findings, results, techniques, or other products that were developed or extended from the project generated or contributed to an **outcome/impact**. Describe the results of the project evaluation. Indicate how resources and activities helped to produce project outputs and achieve project outcomes and impacts. CSREES defines **outcomes/impacts** as a **change in knowledge, actions,** or **conditions**.
    - A **change in knowledge** occurs when the participant (scientist, trainee, or citizen) learns or becomes aware. Examples of a change in knowledge include: new fundamental or applied knowledge (such as results of sampling, surveying, laboratory, or data analysis); methods and techniques; policy knowledge; improved skills; or increased knowledge of decision-making, life skills, and positive life choices among youth and adults.

- A **change in actions** occurs when there is a change in behavior or the participants act upon what they have learned (adoption of techniques and methods or a change in practice). Examples of a change in actions include: application and actual use of fundamental or applied knowledge; adoption of new or improved skills; direct application of information from publications; adoption and use of new methods or improved technologies; use of skills by youth and adults in making informed choices; or adoption of practical policy and use of decision-making knowledge.
- A change in conditions occurs when a societal condition is changed due to a participant's action. Examples of a **change in conditions** include: development of the principal discipline(s) of the project or other disciplines; development of human resources; physical, institutional, and information resources that improve infrastructure; technology transfer; management and behavioral changes and adjustments; quantified changes in descriptive statistics (trade balance, export sales, etc.); better and less expensive animal health; changes in conditions (e.g., wages, health care benefits, etc.) of the agricultural workforce; higher productivity in food provision; quantified changes in quality-of-life for youth and adults in rural communities; safer food supply; reduced obesity rates and improved nutrition and health; or higher water quality (e.g., increased water clarity) and a cleaner environment (e.g., measurably reduced pollution).

8. **Projections:** State how any new information can and/or will be used.
9. **Publications:** Cite the publications (or abstracts) that have resulted from the project.

Send your progress report to ARCGrants@wsu.edu by 5:00 p.m. (PST) the close of business on Monday, October 19, 2009 as a Word document attached to the email.

Progress reports must include information for all the above categories. Reports that do not comply with the required format will be returned to the author for further information.