BIOAg Program: Request For Proposals

The Center for Sustaining Agriculture and Natural Resources (CSANR) Biologically-Intensive Agriculture and Organic Farming (BIOAg) program builds sustainable agriculture for healthy farms, communities, & ecosystems by fostering the development, understanding, and use of biologically-intensive & organic strategies.

Sustainable agriculture is economically viable, environmentally sound and socially responsible.

Context:
The challenges and demands for sustainable agriculture and food systems are ever increasing. Rising input costs, climate change, changing pest populations and control options, local and global demand for high quality products, and environmental consequences of farming are just a few of the pressures on our resource base and people engaged in production, processing, and distribution of agricultural products. Organic farming has expanded in recent years in response to some of these concerns. Many organic or biologically-based methods whether traditional or new also can be used in some conventional systems to improve cost-effectiveness and sustainability. The BIOAg Program was established through a collaborative effort of WSU CSANR and concerned Washington stakeholders to develop, deliver, and increase the use of tangible biologically-intensive and organic solutions to enhance the sustainability of Washington’s agriculture and food systems.

Goal:
The goal of this proposal solicitation is to engage a broad, interdisciplinary spectrum of WSU faculty in projects that further the development, understanding, and use of biologically intensive and/or organic principles, practices, and technologies to improve the sustainability of agriculture and food systems in Washington State. Addressing critical issues and producing meaningful change will require both deep interdisciplinarity that crosses departments, colleges, natural/social/economic sciences, etc.; and integration of WSU’s roles in research, extension, and education. Collaboration between research, extension, and teaching faculty, and non-WSU entities is encouraged in both project development and in translating results into impacts. Wherever this would increase project impact all BIOAg projects should be interdisciplinary and/or integrated, regardless of the dollar amount awarded.
**Priority areas for 2008:**

Projects that address the following priority areas will be considered for funding this year. Investigators are encouraged to discuss potential proposal ideas with Lynne Carpenter-Boggs, David Granatstein, or Chad Kruger (contact information below). A list of previously funded BIOAg projects is contained in this solicitation for reference – but new project ideas and approaches are highly encouraged.

- Biological inputs and management to reduce petrochemical and/or toxic inputs
- Alternative crops and cropping systems (high value specialty crops, farm diversification, sustainable biofuels, crop-livestock integration)
- Sustainable farming or food systems practices to increase food quality, nutrition, or safety
- Organic-conventional crossovers – Methods used in organic farming and food systems that can also be used in conventional systems to improve sustainability
- Assessing the environmental, economic, and social impacts of agriculture & food systems in ways that lead to potential improvements.

**CSANR hereby solicits grant proposals of 5 types.** Approximately $400,000 is available, to be used by June 30, 2009. Funding decisions will be finalized in mid-June. Funding will be awarded for one year, with up to 2 yrs renewal funding possible, depending on good progress and efforts at leveraging funding.

1. **BIOAg Projects:**

   **Description:** Projects that develop, investigate, or demonstrate sustainability on farms or in food systems using BIOAg principles. These project grants are intended to seed exploration of new research ideas, overcome remaining technical / economic / social barriers to the use of existing BIOAg practices, and ensure that existing research is utilized.

   **Project Grant Budgets:** $1,000 – $30,000.

2. **Integrated BIOAg Projects:**

   **Description:** These are not just bigger projects, but interdisciplinary integrated projects that address one or more priority areas using multiple perspectives and approaches. Integrated projects are expected to have multiple investigators from different disciplines, and to use both research with extension and/or educational components in order to increase the likelihood of a breakthrough in understanding and/or more rapid adoption of BIOAg practices / technologies.

   Integrated projects must be:
   a. **Interdisciplinary:** At least 3 PI’s from significantly different disciplines or roles. Many problems require multiple perspectives and approaches to make real progress.
   b. **Integrated:** Must include research and significant extension and/or education integrally involved (not just an afterthought add-on but helping guide the research).
   c. **Valuable:** Address critical (see context above) issue(s) in effective ways.

   **Integrated Project Grant Budgets:** up to $150,000 will be available for one or two projects. Additional sources of funding are encouraged to match BIOAg funding. Projects submitted as integrated grants that do not pass a pre-screening may still be considered for funding at a lower level as a project grant.
3. **BIOAg Outreach Mini-Grants:**

   **Description:** Tours, workshops, and other outreach that demonstrates sustainability on farms or in food systems.

   **Project Budgets:** $100 – $2,000.

4. **BIOAg Learning Site Project Grants:**

   **Description:** Tours, workshops, projects, improvements at **BIOAg Learning Sites** (see below) that will demonstrate BIOAg in action, or for projects or small equipment that increase the quality or ease of future outreach at the Learning Site. **Learning Site Projects and proposals must be discussed and planned with one or both of the site liaisons listed below.**

   **Project Budgets:** $100 – $3,000.

5. **BIOAg Education Grants:**

   **Description:** Academic courses, course improvements, field trips, and other activities that support, strengthen, increase, and improve access to WSU’s courses in organic agriculture, sustainable food systems, and sustainability concepts. BIOAg’s education goals are to increase the number and quality of students, courses, and hands-on learning opportunities that emphasize sustainable and organic agriculture and food systems.

   **Project Budgets:** $100 – $15,000.

**Proposal Outline**

**PROPOSAL TYPE (INTEGRATE PROJECT, PROJECT, OUTREACH, OR LEARNING SITE):**

**TITLE:**

**PRINCIPAL INVESTIGATOR(S):**

**COOPERATOR(S) AND/OR BIOAg LEARNING SITE(S):**

**1-YR FUNDING:**

   **FUNDING REQUESTED:**

   **MATCHING FUNDS (DO NOT INCLUDE WSU SALARIES):**

**PROJECT DURATION (CURRENT YEAR AND EXPECTED PROJECT DURATION EX. YR 1 OF 2):**

**LEVERAGE PLAN (IF LONGER THAN 1-YR PROJECT, LIST OTHER POTENTIAL SOURCES OF FUNDING.)**

**Pursuit of leverage funding will be required for continued BIOAg funding.)**

**ABSTRACT (250 WORD MAX):**

**INTRODUCTION / JUSTIFICATION:**

**1-YR OBJECTIVES:**

**PROCEDURES (WORK TO BE COMPLETED):**

**EXPECTED OUTPUTS**

   **PUBLICATIONS, HANDOUTS, OTHER TEXT & WEB PRODUCTS:**

   **OUTREACH & EDUCATION ACTIVITIES:**

   **OTHER:**

**EXPECTED IMPACTS**

   **SHORT-TERM (KNOWLEDGE GAINED AND SHARED):**

   **INTERMEDIATE-TERM (CURRENT & EXPECTED CHANGE IN BEHAVIORS):**

   **LONG-TERM (POTENTIAL CHANGE IN ECONOMIC/ENVIRONMENTAL/SOCIAL SITUATIONS):**

2008 BIOAg Combined RFP pg.3 http://csanr.wsu.edu/BIOAg/
EVALUATION PLAN: (HOW WILL YOU DETERMINE IF OBJECTIVES OF PROJECT COMPLETION, DISSEMINATION, AND ADOPTION WERE MET)

BUDGET:
- SALARY/WAGES
- MATERIALS AND SUPPLIES
- TRAVEL

Details
- All proposals are due by 5pm on Monday, **May 19, 2008**. Applicants will be notified of results in mid-June.
- At least one PI must be WSU faculty for proper fund management.
- Mini-grant and Learning Site proposals should be no more than 2 pages long, including budget; Project and Education grant proposals should be no more than 4 pages, including budget; Integrated Project grant proposals should be no more than 6 pages, including budget.
- Use the proposal outline below, with 11-12 pt font and 1" margins.
- We encourage proposals to integrate research, extension, and education wherever this would improve project value.
- Projects that are leveraged with other grant or gift support are encouraged.
- Proposals should address as many of the criteria below as are relevant.
- Send Word file to lcboqgs@wsu.edu

**BIOAg Grants Criteria**
(120 pts total)
1. Develops or improves understanding of farm or food system sustainability (20)
2. Uses or addresses bio-intensive and/or organic approaches (20)
3. Increases likelihood of adoption and use of sustainable methods (20)
4. Scientific Merit (20)
5. Reaches a large or critical audience or acreage base (10)
6. Evaluation plan (10)
7. Appropriate cost (10)
8. Builds new interdisciplinary partnerships (10)

**Examples of BIOAg:**

BIOAg practices can be useful to the full spectrum of farming operations in Washington-conventional and organic, small and large, eastside and westside.

- **Legume rotations and green manures** supply biological nitrogen and break disease cycles, reducing the need for fertilizer and pesticide inputs.
- **Mustard green manure** suppresses several disease agents as it decomposes in the soil, allowing some growers to forego soil fumigation while seeing soil quality improvements.
- **Biological pest and disease control.** For example Spinosad, a microbial insecticide, is an effective control for cherry fruit fly that can cut costs by over 50 percent. Spinosad is now used by virtually all organic cherry growers in the western U.S., and by an increasing number of conventional growers who appreciate the reduced cost and greater worker safety.
- **BIOAg for biofuels.** Production of renewable fuel from agriculture must be done in a way that protects the soil, water and other natural resources, while increasing producer profits. New uses for by-products from biofuels, such as glycerin from biodiesel, must be developed to add value to the whole enterprise.
Health benefits are cited by many consumers who increasingly seek out organic produce, fresh local products, and pasture-raised meats. Food product quality and nutritional value can be influenced by production methods, livestock diets, processing, and time from field to table.

Intensive rotational grazing is a livestock management method that increases animal densities for short time periods, leading to overall increase in plant and animal productivity and environmental health.

Direct-seed organic farming. Direct seeding and organic farming have so far been mutually exclusive, as direct-seed systems rely on herbicides and organic systems rely on tillage for weed control. Now, growers with the Pacific Northwest Direct Seed Association are requesting ways to bring them together including low-disturbance management of green manures.

Compost tea is intended to supply soluble nutrients, suppress plant diseases, and stimulate plant growth. Many producers report positive results, but health concerns must be addressed, mechanisms and appropriate uses are still undefined, and best management practices are needed.

Adding value to their products is something growers are already doing in many ways, such as ecolabels (e.g. Food Alliance), direct marketing, natural meats, and specialty cheeses. Growers frequently ask for help with economic analysis and assessment of new ideas to take advantage of market niches.

Food system sustainability assessments such as analysis of policy options that may increase the purchase by consumers or institutions of products grown with BIOAg methods.

Projects previously funded by the BIOAg Program include:

- Winter Canola as a Rotation Crop in the Winter Wheat – Summer Fallow Region
- Demonstration and Outreach for Livestock Carcass Composting
- Farming for Food Quality – Symposium and Seminars
- Nutrient Quality and Disease Prevention Benefits of Organic versus Conventional Tomatoes and their Products
- Strategies to Achieve Ecological and Economic Goals in the Transition Phase of Eastern Washington Organic Dryland Grain Production
- Post-Plant Management of Nematodes in Apple Orchards
- Food Safety Needs Assessment for Organic Ag
- Production of DHA Rich Algae biomass as Cattle Feed Supplement to Enhance Milk Quality
- Prediction models for Potato Late Blight
- Carbon Sequestration under Irrigated Switchgrass Production
- Production and quality of winter grown organic vegetables in Washington
- Land EKG Workshop
- Alternative Mulches for Organic Vegetable Production
- Nitrogen Supply and Partitioning in Organic Apples
- Vegetable Variety Evaluation for Organic Production
- Understory Management in Organic Tree Fruits
- Wheat Varieties for Organic Systems
- Washington Organic Market and Acreage Trends
- Compost Teas for Organic Seed Production
- Cover Crops for Organic Weed Control
**BIOAg Learning Sites**

*Learning Site Projects and proposals must be discussed and planned with one or both of the site liaisons listed below.*

<table>
<thead>
<tr>
<th>Learning Site</th>
<th>Liaisons</th>
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<tbody>
<tr>
<td>Quillisascut Farm, Rice</td>
<td>Marcy Ostrom, Chad Kruger</td>
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<tr>
<td>Full Circle Farm, Carnation</td>
<td>Clayton Burrows, Marcy Ostrom</td>
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<td>Maple K Farm, Colfax</td>
<td>Steve VanVleet</td>
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<tr>
<td>G &amp; L Farm, Benge</td>
<td>Don Nelson, Maurice Robinette</td>
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<tr>
<td>Thundering Hooves, Touchet</td>
<td>Lynne Carpenter-Boggs, Don Nelson</td>
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<tr>
<td>Natural Selection Farms, Sunnyside</td>
<td>Chad Kruger</td>
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<tr>
<td>Dennis Nicholson Orchard, Peshastin</td>
<td>Maurice Robinette, David Granatstein</td>
</tr>
<tr>
<td>S &amp; S Homestead Farm, Lopez</td>
<td>Lynne Carpenter-Boggs, Hector Saez</td>
</tr>
<tr>
<td>John Aeschliman Farm, Colfax</td>
<td>Chad Kruger, Hans Kok</td>
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<tr>
<td>21 Acres, Woodinville</td>
<td>Clayton Burrows, Marcy Ostrom</td>
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<tr>
<td>WSU-Puyallup R&amp;E Station</td>
<td>Craig Cogger, Marcy Ostrom</td>
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<tr>
<td>WSU-Pullman Organic CSA</td>
<td>Lynne Carpenter-Boggs, Marcy Ostrom</td>
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**Learning site liaison**

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<thead>
<tr>
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