



# Specialty Crop Block Grant Program-Farm Bill

## Grant Manual

*Fiscal Year 2012 Funding Cycle*

**Grant Proposal Due Date:  
March 27, 2012  
5:00PM**

The forms in this manual may be reproduced.  
Additional copies of this publication may be obtained from our web site at:

<http://www.azda.gov/Main/grantfunds.htm>



# Arizona Department of Agriculture

1688 W. Adams Street, Phoenix, Arizona 85007  
(602) 542-4373 FAX (602) 542-5420

February 3, 2012

Dear Grant Applicant:

The Arizona Department of Agriculture is pleased to present the Specialty Crop Block Grant Program-Farm Bill (SCBGP-FB) Grant Manual. The purpose of this program is solely to enhance the competitiveness of specialty crops in Arizona. For purposes of the program, specialty crops are defined as fruits and vegetables, tree nuts, dried fruits, and nursery crops (including floriculture).

This manual is designed to instruct applicants in preparing successful grant application packets for funding assistance from the Arizona Department of Agriculture (ADA) for revenues appropriated pursuant to the Food, Conservation, and Energy Act of 2008 amendments to the Specialty Crops Competitiveness Act of 2004. Please take the time to read this grant manual carefully and follow all given instructions. **Incomplete applications, applications that include support letters or documentation, or applications that exceed the given page limits shall be deemed ineligible.** You are strongly encouraged to communicate with industry representatives or stakeholders that may be affected by your grant proposal so that they are aware of your efforts.

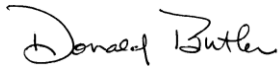
The following substantive changes have been made for the new 2012 SCBGP-FB Grant Cycle:

- Regional or multi-state projects may be considered by ADA. Page 7
- Language was modified to make Application Packet Requirements more clear under the following sections:
  - Project Partner Organization. Page 11
  - Project Purpose. Page 11
  - Potential Impact. Page 13
  - Work Plan. Page 16
  - Budget Narrative – Travel. Page 18
  - Budget Narrative – Contractual. Page 20
  - Budget Narrative – Other. Page 21
  - Project Oversight. Page 22
  - Project Commitment. Page 23
  - Multi-State Projects. Page 23
- Evaluation and Selection Process. Page 26
- Distribution of Unexpended Awarded Funds. Page 33

The Arizona Department of Agriculture anticipates that grant monies will be available to successful applicants by late 2012. ADA may place a per applicant cap on grant awards. This manual contains general program information, criteria rating system, and application packet requirements. Completed applications are due no later than **5:00 PM on Tuesday, March 27, 2012.**

Thank you for your interest in this important program and we look forward to receiving your application packet.

Sincerely,

A handwritten signature in cursive script that reads "Donald Butler".

Donald Butler  
Director

**Specialty Crop Block Grant Program – Farm Bill  
FY 2012 Grant Manual**

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## **I. General Information**

### **I.A. List of Terms and Acronyms**

**ADA** - Arizona Department of Agriculture

**Administrative Costs** - All executive, organizational, and clerical costs associated with the general management of an organization and not costs for the direct execution of the grant project.

**AMS** - Agricultural Marketing Service (a division of USDA)

**A.R.S.** - Arizona Revised Statutes

**Authorized Signature** – Signature of authorized signer

**Authorized Signer** – Individual authorized by the grantee to receive grant funds and sign the Grant Award Agreement

**Collaboration** – Any cooperative effort of eligible applicants, universities, or industry trade associations to execute the completion of the proposed grant project

**DBA** – Doing business as

**FFATA** – Federal Funding Accountability and Transparency Act

**Grant Award Agreement** – ADA’s contract with the authorized signer indicating the grantee’s intention to complete the proposed tasks and authorizing ADA to monitor the progress of the proposed project

**Matching Funds** – A cash contribution toward the completion of the project or new, verifiable in-kind expenditures that the applicant or collaborators will incur contingent upon receiving a grant award

**Project** – Activities proposed to be funded by the SCBGP-FB

**Responsible Party** – the person who becomes responsible for execution of grant project responsibilities

**Specialty Crop** – Fruits and vegetables, tree nuts, dried fruits, and nursery crops (including floriculture) – See expanded list on page 7

**SCBGP-FB** – Specialty Crop Block Grant Program-Farm Bill

**USDA** – United States Department of Agriculture

### **I.B. Mission Statement**

The mission of the Arizona Department of Agriculture (ADA) is to regulate and support Arizona agriculture in a manner that encourages farming, ranching and agribusiness while protecting consumers and natural resources.

### **I.C. Background**

The Specialty Crops Competitiveness Act of 2004 authorized the United States Department of Agriculture (USDA) to enhance the competitiveness of specialty crops. The Food, Conservation, and Energy Act of 2008 (Farm Bill) amended the Specialty Crops Competitiveness Act of 2004. Under the amended Act, the Secretary of Agriculture is directed to make grants to States for each of the fiscal years 2008 through 2012 to be used by State departments of agriculture to enhance the competitiveness of specialty crops.

### **I.D. Grant Writing Resources**

If you have difficulty with this grant writing and application process, you are encouraged to seek help from an appropriate resource. There are several organizations and individuals who offer grant writing services for a fee.

### **I.E. Funding Source and Available Funds**

AMS is charged with distributing block grant funds to state departments of agriculture, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the U.S. Virgin Islands, and the Commonwealth of the Northern Mariana Islands to enhance the competitiveness of specialty crops. Although AMS has not officially announced how much grant funds ADA will receive, ADA projects that approximately \$1,000,000.00 will eventually be available for this funding cycle. ADA plans to make available for grants all the funds appropriated to it under the SCBGP-FB this year less ADA's share for program administration. ADA may withhold up to ten percent for program administration. 7 C.F.R. §1290.6(b)(4).

ADA plans to award multiple grants from these funds for the fiscal year 2012 grant cycle. ADA may place a per applicant cap on grant awards. USDA, however, as the funding source, has the final approval over grant projects. Thus, while ADA's Director makes the preliminary decisions based on ADA staff review and recommendations from a review panel of industry representatives, **USDA will make the final decision concerning grant awards.**

### **I.F. Quarterly Reimbursements and Funding Advances**

Quarterly reimbursement will be contingent upon compliance with guidelines set forth by ADA. Each payment is conditioned upon receipt and approval by the Program Coordinator of the Deliverable(s) specified in the Scope of Work and shall be accompanied by reasonable assurance (documentation, receipts, invoices, etc.) that the goods and services for which payment is requested were actually received and performed. ADA has the right to disallow costs determined inappropriate or unreasonable. The Program Coordinator shall have a minimum of thirty (30) working days to approve the Deliverable(s) and payment request forms.

Requests for fund advances will be considered on a case by case basis. If a funding advance is requested, the need for the advance must be clearly stated in the project proposal. Advances will be limited to the minimum amounts needed to meet current disbursement needs and will be scheduled so the funds are available closely as is administratively possible to the actual

expenditures by the grantee. In addition, initial funding advances shall **not exceed 25%** of the total grant award and must be expended within 30 days of receipt. Matching contributions by applicants, although not required, are highly encouraged and will be factored into the approval criteria measurements.

### **I.G. Eligible Applicants**

State and/or local organizations, government entities, producer associations, academia, community based organizations, and other specialty crop stakeholders are eligible to apply either as single entities or in combined efforts. Regional or multi-state projects may be considered by ADA. SCBGP-FB grant funds will be awarded for projects of up to 3 years duration. More than one project application packet per applicant may be submitted. If submitting multiple project application packets, please prioritize your submissions.

### **I.H. Eligibility Requirements**

In order to receive an award and enter into a Grant Award Agreement with the ADA, all applicants that are entities (as defined in 2 CFR Part 25, subpart C) must provide a Data Universal Numbering System (DUNS) number to the ADA. A DUNS number is a nine-digit number established and assigned by Dun and Bradstreet, Inc. (D&B) to uniquely identify business entities. A DUNS number may be obtained from D&B by telephone (currently 866-705-5711) or via the web (currently at <http://fedgov.dnb.com/webform>).

Entity, as it is used in this section, means all of the following, as defined at 2 CFR Part 25, subpart C:

- A governmental organization, which is a State, local government, or Indian Tribe;
- A foreign public entity;
- A domestic or foreign nonprofit organization;
- A domestic or foreign for-profit organization; and
- A federal agency receiving an award under ADA.

### **I.I. Eligible Projects**

To be eligible for a grant, the project(s) **must solely enhance the competitiveness** of U.S. or U.S. territory grown specialty crops in either domestic or foreign markets. Projects must also benefit more than one commercial product (e.g., ABC Company brand), organization or individual.

Regional or multi-state projects present an opportunity to address complex issues both efficiently and comprehensively within the specialty crop industry. An application for funding of a multi-state project should be submitted in every state involved in the project, and the application submitted to ADA should specifically address how the funds requested benefit Arizona.

Examples of enhancing the competitiveness of specialty crops include, but are not limited to: Research, promotion, marketing, nutrition, trade enhancement, food safety, food security, plant health programs, education, “buy local” programs, increased consumption, increased innovation, improved efficiency and reduced costs of distribution systems, environmental concerns and conservation, product development, and developing cooperatives.

AMS encourages applicants to develop projects that solely enhance the competitiveness of specialty crops pertaining to the following issues affecting the specialty crop industry: increasing child and adult nutrition knowledge and consumption of specialty crops; improving efficiency and reducing costs of distribution systems; assisting all entities in the specialty crop distribution chains in developing “Good Agricultural Practices”, “Good Handling Practices”, “Good Manufacturing Practices”, and in cost-share arrangements for funding audits of such systems for small farmers, packers and processors; investing in specialty crop research, including research to focus on conservation and environmental outcomes; enhancing food safety; developing new and improved seed varieties and specialty crops; pest and disease control; and development of organic and sustainable production practices.

### **I.J. Multi-State Partnerships**

Multi-state projects are encouraged to provide a growing need for solutions to problems that cross state boundaries such as, but not limited to: addressing good agricultural practices, research on crop productivity or quality, enhancing access to federal nutrition programs, pest and disease management, or commodity-specific projects addressing common issues in multi-state regions.

A project is multi-state when an organization receives SCBGP-FB funding from more than one state to execute the same or multiple components of the same project. The project must be identified as a multi-state project on the application cover sheet.

A high-quality multi-State project proposal demonstrates the following information and procedures:

1. The objectives are clearly focused
2. Each participant listed has direct involvement in the accomplishment of the stated objectives
3. The project is multi-state
4. The project proposal has been peer-reviewed
5. The proposed project is oriented toward accomplishment of specific outcomes and impacts and based on the priorities developed from stakeholder input
6. The proposal describes how the States are going to collaborate effectively within the project
7. Each State participating in the project submits the project in their State Plan indicating which State is taking the coordinating role and the percent of the budget covered by each State

### **I.K. Eligible and Ineligible Specialty Crops**

Commonly recognized specialty crops are fruits, vegetables, tree nuts, dried fruits, and nursery crops (including floriculture). Eligible crops also include: Christmas trees, cut flowers, maple syrup, honey, hops and tea leaves.

Please visit the USDA-AMS Specialty Crop Block Grant Program-Farm Bill website ([www.ams.usda.gov/scbgrp](http://www.ams.usda.gov/scbgrp)) for a more comprehensive list of eligible and ineligible commodities, listed under “Definition of Specialty Crops.”

### **I.L. Disagreement Process**

Applicants have the right to protest the grant manual and grant awards. A protest of an award or proposed award of a grant and any appeal shall be resolved in accordance with the rules of procedure adopted pursuant to A.R.S. § 41-2611. See A.A.C. R2-7-A901 et seq. An interested party shall file a protest in writing with the Director of the Department of Agriculture, with a copy to the State Procurement Administrator. A protest of the grant manual shall be filed before the due date and time for grant applications. A protest of a proposed award or of an award shall be filed within 10 days after the grant applications are open for public inspection. A protest shall include the following information:

1. The name, address and telephone number of the protesting party;
2. The signature of the protesting party or its representative;
3. Identification of the agency soliciting grant applications and the name and year of the grant program;
4. A detailed statement of the legal and factual grounds of the protest, including copies of relevant documents; and
5. The form of relief requested.

### **I.M. General Compliance**

All awarded grant projects must comply with all applicable federal and state laws and regulations and the terms of the grant award.

The Grantee shall comply, as applicable, with the Specialty Crop Competitiveness Act of 2004 of Public Law 108-465 as amended (7 U.S.C. § 1621 note); specialty crop block grant program regulations at 7 C.F.R. Parts 1290 and 1291; uniform federal grant regulations at 7 C.F.R. Parts 3015, 3016, 3019 and 3052; federal cost principles at 2 C.F.R. Part 220 (OMB Circular A-21), 2 C.F.R. Part 225 (OMB Circular A-87) and 2 C.F.R. Part 230 (OMB Circular A-122); and OMB Circular A-133 related to audits.

### **I.N. Permitting Requirements**

SCBGP-FB funded projects may involve conducting work that requires permits and clearances from various agencies. ADA does not determine which, if any, permits are required for specific projects nor does it review permits for accuracy or appropriateness. Applicants are responsible for determining that all necessary permits that apply to their project are identified and obtained.

### **I.O. Arbitration**

Grantees must agree to use arbitration, after exhausting all applicable administrative remedies, to resolve disputes arising out of the Grant Award Agreement to the extent required pursuant to A.R.S. §12-1518.

### **I.P. Indemnification**

Grantees shall indemnify and hold harmless the State of Arizona, its departments, agencies, boards and commissions for the vicarious liability of the State as a result of entering into a Grant

Award Agreement. However, the State of Arizona, its departments, agencies, boards and commissions shall be responsible for their own negligence.

#### **I.Q. Non-Discrimination**

Grantees must agree to comply with Executive Order 75-5, as amended by Executive Order 2009-09, prohibiting discrimination in employment.

#### **I.R. Conflict of Interest**

Grant Award Agreements will be subject to cancellation pursuant to A.R.S. § 38-511.

#### **I.S. Non-Availability of Funds**

Every payment obligation of the State under the Grant Award Agreement will be conditioned upon the availability of funds appropriated or allocated for the payment of such obligation. If funds are not allocated and available for the continuance of the Agreement, the Agreement may be terminated by the State at the end of the period for which funds are available. No liability shall accrue to the State in the event this provision is exercised, and the State shall not be obligated or liable for any future payments or for any damages as a result of termination under this paragraph.

#### **I.T. Records Requirements**

Pursuant to A.R.S. § 35-214 and 7 C.F.R. §§ 3015.21 & 3016.42, Grantees must agree to retain and contractually require each subcontractor to retain all records for a period of five years after completion of a Grant Award Agreement and until any litigation, claim, negotiation, audit, cost recovery, or action involving the records has been completed. Grant Award Agreements will also require that all records shall be subject to inspection and audit by the State at reasonable times and the Grantee shall produce the original of any or all records upon request.

#### **I.U. Monitoring**

ADA reserves the ability to perform site monitoring visits to any and all grantees to ensure that work is progressing within the required time frame and that fiscal procedures are followed accurately and appropriately. Monitoring includes both financial and program information as well as site visits.

#### **I.V. Copyright**

AMS and ADA reserve a royalty-free, nonexclusive, and irrevocable license to reproduce, publish or otherwise use and to authorize others to use for government purposes (i) the copyright in any work developed under a grant and (ii) any rights of copyright to which a grantee purchases ownership with grant support.

#### **I.W. E-Verify**

If the grantee is an employer as defined in A.R.S. § 23-211(4), the grantee shall register with and participate in the e-verify program. Before receiving the grant funds, the grantee shall provide proof to the Department that the grantee is registered with and is participating in the e-verify program. If the Department determines that the grantee is not complying with this section, the Department shall notify the grantee by certified mail of the Department's determination of noncompliance and the grantee's right to appeal the determination. On a final determination of

noncompliance, the grantee shall repay all monies received as a grant to the Department within thirty days of the final determination

### **I.X. Lawful Presence**

If a grantee is a natural person, the grantee must provide to ADA evidence of lawful presence in the United States as required under 8 U.S.C. § 1611 et seq. and A.R.S. § 1-501 before becoming eligible to enter into a Grant Award Agreement and to receive grant funds.

## **II. Application Packet Information**

### **II.A. Application Packet Details and Format**

Sample Application packets can be found in Appendix D. Application packets must be submitted in entirety. Incomplete application packets, packets that include support letters, and packets that exceed the page limit shall be deemed ineligible. Your grant application packet must conform to the following:

- Proposal(s) must contain the details listed in the Application Packet Requirements (section II.C.) in the sequence presented.
- An entity may submit more than one application packet, but only if the application packets are for completely different projects.
- Proposal(s) must be typed, single spaced, in 12 pt. Times New Roman font.
- Proposal(s) must be submitted on 8.5x11 white paper with one inch margins.
- Each page must be numbered.
- **Complete application packets must not exceed 6 pages in length (1 page for the Application Cover Sheet, 3 pages for the project proposal and 2 pages for the budget/budget narrative)**
- Do not bind application packets. Each application packet must be stapled once in the upper left-hand corner.
- Submit **one** printed complete original application packet, **ten** complete copies of the signed application packet and **one** electronic copy of the application packet on CD (Adobe file for application cover sheet, Microsoft Word 97-2003 or 2007 file for the project proposal and budget narrative and Microsoft Excel 97-2003 or 2007 file for the budget) of the application packet.
- **The person authorized to receive funds must sign the original application packet and all subsequent documents in the grant process. Only the original application must have an original signature.**

### **II.B. Exclusions**

- No administration costs may be allotted to the budgeted projects.
- Travel expenses associated with the project shall follow the Arizona State Travel Policy as outlined in Section II-D of the State of Arizona Accounting Manual, which can be viewed at <http://www.gao.az.gov/publications/SAAM/default.asp>.
- Funding **cannot** be utilized for meals, with the exception of the actual cost of meals (not exceeding State rates) consumed during periods of official travel.
- Grant funds may not be used to fund political activities in accordance with provisions of the Hatch Act (5 U.S.C. 1501-1508 and 7324-7326).

## II.C. Application Packet Requirements

All applicants **must** adhere to the following instructions, in addition to other requirements as stated in this grant manual, including all definitions and abbreviations, to be considered eligible for grants. See Appendix D for examples.

- **Application Packets missing any of the subsequent information or including information not requested (such as: support letters, reports, or links to support letters and reports) shall be deemed ineligible.**
  - **In addition, any applications with the number of pages in excess of the limit of 6 pages shall be ineligible.**
1. **Application Cover Sheet** – The signer must be authorized to enter into a contract with the Department. Project Titles shall be no longer than 6 words.
  2. **Abstract** – Include a project abstract of 200 words or less. The project abstract must contain a summary of the proposed project suitable for dissemination to the public. It should be a self-contained description of the project and should contain a statement of objectives and methods to be employed.
  3. **Project Partner Organization** - Include the name of any organization that will partner with the applicant to execute the project. (If applicable)
  4. **Project Purpose** – The following questions shall be addressed in this section:
    - What is the specific issue, problem or need to be addressed by the project?
    - Why is the project important and timely?
    - What are the objectives of the project?
    - Does the project have the potential to enhance the competitiveness of non-specialty crops (ex: farmers markets, general buy local, etc.)?
      - If YES, describe the methods or processes the applicant will use to ensure all grant funds will solely enhance the competitiveness of eligible specialty crops. (Ex: using the registration process for a conference to ensure that only specialty crop farmers attend; matching 50 percent of the funds to cover the portion of the project that does not benefit specialty crops)
    - If the project builds on a previously funded SCBGP or SCGBP-FB project, then
      - Describe how the projects differ from one another. Provide a summary (3 to 5 sentences per project) of the results of the completed work on this project, the long-term quantifiable effects of these results (especially as they impact the specialty crop industry), and how this year’s funding will supplement or build on previous funding from the SCBGP or SCGBP-FB.

- Has the project been submitted to or funded by another Federal or State grant program?
  - If NO, indicate that it has not.
  - If YES, identify which Federal and/or State grant program and describe how the project differs from and supplements efforts of the SCBGP-FB and the other Federal or State grant program rather than duplicating funding efforts. The SCBGP-FB will not fund duplicative projects.

*Example 1*

The recent introduction of X virus has threatened specialty crop production; the virus has already caused enormous crop losses in many States (PROBLEM). This research proposal will assess the likely spread of the virus from the initial introduction point and will identify plant reservoir hosts for the disease to form the basis for an integrated pest management strategy to prevent further crop losses (IMPORTANCE and OBJECTIVE). This project was submitted to grant program X to provide one-half salary for the Senior Research Specialist. This individual will coordinate most of the laboratory operations and perform a majority of the laboratory and greenhouse experiments. This project will not duplicate efforts, but rather enhances the program by providing additional dollars to elevate the part-time position to full time status.

*Example 2*

Many school children do not have access to healthy fruits and vegetables (ISSUE). The School Nutrition Association will subsidize installation of salad bars in forty schools to increase access to nutritious fruits, vegetables and nuts in school breakfasts and lunches (OBJECTIVE). Not only will this result in increased purchases from specialty crop growers, but the evaluation component also will provide a model for other schools in their efforts to market healthy meals to children (IMPORTANCE). This project has not been submitted or funded by another Federal or State grant program.

*Example 3*

This project would establish a crisis communication plan for the fruit and vegetable industry (OBJECTIVE) in case of emergency such as an extreme drought (IMPORTANCE). The previous year's grant funds were used to complete phase 1 which consisted of research and an audit of the fruit and vegetable industry and created recommendations for handling a crisis. Phase 2 continues the project by implementing and disseminating these recommendations through out the State (SHOWS HOW PROJECT COMPLEMENTS PREVIOUS WORK). This project had not been submitted to or funded by another Federal or State grant program.

*Example 4*

The State will partner with a production team to create a suite of six television and radio public service announcements to introduce and promote locally produced specialty crops (OBJECTIVE) thereby changing the purchasing behavior of consumers and retailers to "buy local" (NEED). This project is a State marketing program. The State will only promote eligible specialty crops such as strawberries, almonds, and peaches. Matching funds will be used to promote other commodities which fall under the state marketing program but are outside the scope of the specialty crop definition (METHODS OR PROCESSES USED TO ENSURE ALL GRANT FUNDS ENHANCE THE COMPETITIVENESS OF ELIGIBLE

SPECIALTY CROPS). This project has not been submitted or funded by another Federal or State grant program.

5. **Potential Impact** – This section should show how the project potentially impacts the specialty crop industry and/or the public rather than a single organization, institution, or individual. The following questions should be answered:

- Who are the specialty crop beneficiaries of the project?
- How many specialty crop beneficiaries will be impacted?
- How will the specialty crop beneficiaries be impacted by the project?
- What is the potential economic impact of the project if available?

*Example 1*

This project will impact the State's approximately 3,000 farms involved in growing specialty crops (BENEFICIARIES IMPACTED AND #'s). These crops represent approximately \$1 billion in farm income and are the largest crop in the State (ECONOMIC IMPACT). In order to continue the growth this industry has experienced in recent years, this project will develop and conduct marketing efforts to increase their market share (HOW BENEFICIARIES WILL BE IMPACTED).

*Example 2*

Existing and new specialty crop growers taking part in the grower education will receive an extensive education on many aspects of participating in specialty crop production and direct retail marketing (BENEFICIARIES). It is estimated that the number of specialty crop growers that will be participating in the educational workshops is 50 (# OF BENEFICIARIES). Through grower education, farmers will be exposed to information on how to grow crops and successfully sell their produce at direct-to-consumer markets (HOW BENEFICIARIES WILL BE IMPACTED).

*Example 3*

In 2008, according to USDA, National Agricultural Statistics Service (NASS), the State's specialty crop industry occupied 3,100 acres and had a value for utilized production of \$20 million. This is evidence of the success and potential for this program. New specialty crop varieties being developed through this program will enable the State's 150 farmers (# OF BENEFICIARIES) to be competitive in growing and marketing these specialty crops (HOW BENEFICIARIES WILL BE IMPACTED). These new crops could provide \$10 - \$15 million in additional farm income (POTENTIAL ECONOMIC IMPACT).

6. **Expected Measurable Outcomes** – The following questions shall be answered in this section.

- What are at least two distinct, quantifiable, and measurable outcomes that directly and meaningfully support the project's purpose and is of direct importance to the intended beneficiaries? The measurable outcome, when possible, should include the following:

- GOAL
  - PERFORMANCE MEASURE
  - BENCHMARK
  - TARGET
- How will performance toward meeting the outcome(s) be monitored?
    - What are your data sources for monitoring performance?
    - How will data be collected? For example are you using a survey or questionnaire?

Examples of outcome measures may include, but are not limited to: per capita consumption, consumer awareness as a percent of target market reached, market penetration based on sales by geographic region, dollar value of exports, or web site hits. For research grants, they may include generation of new knowledge, research quality, attainment of leadership in the field, or the development of human resources (e.g., providing opportunities for graduate students).

#### Steps to Developing Outcome Measures

Whenever possible, the outcomes should include a goal, performance measure, benchmark, and a target. The following four steps provide guidance on how to develop outcome measures.

1. Determine what the project will accomplish, e.g., the intended results of the project, generally expressed as a goal or objective
  - Goals should be: a) based on a needs analysis and be specific, realistic results you hope to achieve through the project activities; b) specific; and c) outcome-oriented. Outcome-oriented objectives identify the ultimate result, while the work plan activities identify how you intend to achieve the objectives. When developing outcome-oriented objectives, ask yourself “why” you are performing each grant activity; and specify not only what will be achieved, but also when those results will be achieved.
2. Figure out how to measure the results and select the performance measure
  - For each objective identified in step 1, select the performance measure. Performance measures are measures/indicators used to observe progress and measure actual results compared to expected results. They are usually expressed in quantifiable terms and should be objective and measurable (numeric values, percentages, scores and indices); although in certain circumstances qualitative measures are appropriate.
3. Determine the benchmark for each measure and set target goals for future performance
  - For each measure identified in step 2, determine the benchmarks against which you will measure. Benchmarks are usually determined by researching past circumstances in the area you are trying to measure. As an alternative, you may use benchmarks to establish by third parties accepted as the standard-

setters in your industry. If data does not exist, describe the lack of data. It may be appropriate in the first year to set vaguer targets, such as “improvement” where any increase represents outcome achievement, and set more concrete targets in subsequent years when benchmark data is available.

Use the benchmark data to set targets for the quantity of change expected. Targets may be framed in terms of:

- a. Absolute level of achievement (ex: feed 150 homeless people);
  - b. Change in level of achievement (ex: feed 150 homeless people, 35 more than last year); or
  - c. Change the relation to the scale of the problem (ex: feed 150 homeless people, approximately 10% of the city’s homeless population.)
- If you are starting up a new project or trying new approaches remember that little or no measurable progress will be evident in the project start-up phase. This delay in seeing measurable results should be reflected in target-setting. When setting targets, you should take into account external factors that influence your success. You may have a grand ultimate goal, but you should view annual targets as small steps toward that ultimate goal.

You may also want to set stretch goals by using benchmarks as your targets. Benchmarks tell you how the rest of the industry is doing; when you gather data for benchmarks, you look at the results of other organizations serving your type(s) of customers, doing your type of work. In your State Plan, you may want to stick to a modest level of planned achievement and reserve your stretch goals for internal use. Another alternate is to include minimum and maximum targets in your application. For example, “We plan, at a minimum, for a 5% increase. However, we will strive for a 10% increase, which our data shows is possible if all external factors work in our favor and our new methodology yields the same results in the demonstration phase.”

### Examples of Outcome Measures

The following are examples of outcome measures. They do not include examples of a performance monitoring plan.

#### *Example 1*

Increase the number of specialty crop farmers following Good Agricultural Practices (GOAL) from the current 18 (BENCHMARK) to 55 in two years (TARGET) measured by the number of GAP audits passed (PERFORMANCE MEASURE).

#### *Example 2*

Increase fruit and vegetable purchases (GOAL) from the current level of \$2.50 (BENCHMARK) to at least \$3 per enrolled student in awarded schools in one year (TARGET) measured by bi-annual school reports (PERFORMANCE MEASURE).

*Example 3*

Work directly with specialty crop industry X to develop a uniform tool to assess the health of their specialty crops to give the industry early warning of potential problems in order to optimize their management practices (GOAL). No such tool currently exists (BENCHMARK). The success of the evaluation will be measured by interviewing 20 stakeholders at the end of three years to determine if they developed the tool (TARGET and PERFORMANCE MEASURE).

*Example 4*

Develop a predictive model for the spread of the specialty crop disease, an analysis of virus resistant varieties, and a foundation for an integrated pest management (IPM) strategy to combat the disease (GOAL). No such model currently exists (BENCHMARK). The information will be shared with more than 700 tomato growers, increasing awareness of the model, at the 2008 conference break-out session (TARGET) measured by attendance at the session (PERFORMANCE MEASURE).

*Example 5*

Increase visits to the Specialty Crop Website (GOAL) 25% over the course of one year (TARGET) from the current 9,000 annual hits (BENCHMARK) by measuring website visits each month over the next year (PERFORMANCE MEASURE).

*Example 6*

Increase consumer awareness of specialty crops by distributing 1000 pieces of informational materials containing locations where to purchase specialty crops (GOAL). Six months after distribution, survey 50 locations (PERFORMANCE MEASURE) to determine if sales increased by 25% (TARGET) from the level before distribution of marketing materials (BENCHMARK).

7. **Work Plan/Timeline** – The following questions shall be answered in this section:

- What activities are necessary to accomplish the projects objectives?
  - When will your performance monitoring/data collection plan activity be accomplished?
  - How will outcomes measures be completed or measured inside the grant period?
- Who will do the work of each activity? If collaborative arrangements or subcontracts are used, make sure you specify their role and responsibilities in performing project activities.
- When will each activity be accomplished? Include timelines for accomplishing each activity. Make sure to include the month and year the project is scheduled to begin and end, **beginning no sooner than October 1, 2012.**

<b>Project Activity</b>	<b>Who</b>	<b>Timeline</b>
Assemble the specialty crop steering committee to provide direction throughout project	Agricultural Marketing Council, specialty crop industry representatives from the mushroom, apple, and peach councils	January 2013
Develop statement of work for literature review	Ag Marketing Council	January 2013
Procure literature reviewer	Ag Marketing Council	January – February 2013
Conduct literature review on the post-harvest nutritional content of specialty crops and report gaps to steering committee	ABC Consultant	February - March 2013
Prioritize research gaps; develop/issue Request for Proposals (RFP) for original research	ABC Consultant	March - April 2013
Receive proposals; distribute to steering committee	ABC Consultant	April – May 2013
Review and select proposals	Specialty crop steering committee	April – May 2013
As appropriate, refer proposals to individual commodity research and promotion programs	Specialty crop steering committee and individual research and promotion programs	April - May 2013
Develop and execute research grant agreements for selected projects	Ag Marketing Council	May – June 2013
Obtain progress reports from researchers; synthesize for steering committee	Ag Marketing Council	September 2013, December 2013, March 2014, June 2014
Disseminate research results to steering committee and SCBGP-FB showing progress toward project outcomes	Ag Marketing Council	June 2012 – September 2014

8. **Budget Narrative** – A thorough and detailed budget must be submitted with the application packet. Please use the budget template included in the grant manual. ***No administrative costs may be allotted to the budgeted project.***

As a reminder, matching contributions are highly encouraged and detailed descriptions should be included with the budget estimations under the matching funds category.

Matching funds should only be described under the matching funds category.

For multi-state projects, the budget must indicate the percentage of the total budget proposed to be covered by each participating State and contain a breakdown of expenses indicating which State is being asked to cover each cost.

Also, each budget must contain a narrative in paragraph format for each project in order for AMS to determine that the costs are reasonable and allowable. Include a written explanation for each budget item listed below as it applies to your project.

1. PERSONNEL (Total) – Persons employed by the grantee organization with SCBGP-FB funds should be listed in this category. Those employed elsewhere would be listed as subcontractors or consultants in the “CONTRACTUAL” category. In order for secretarial and clerical salaries to be allowable as direct charges to the awards, a justification of how the person will be directly involved in the project must be included in the narrative. General administrative or accounting are not considered acceptable. The duties must be directly related to the project plan.
  - For each project participant, indicate their title, percent of full time equivalents (FTE), and corresponding salary for the FTE.

For example, if a project participant’s salary is \$50,000 and they will spend 50% of their time on the project, the total budgeted salary cost would be \$25,000.

*Example*

**Personnel (\$27,000.00)**

Expenses of **\$21,000.00** are requested for one half-time Senior Research Specialist (0.5 FTE) who will coordinate most of the laboratory operations and perform a majority of the laboratory and greenhouse experiments. Additionally, the specialist will be responsible for data entry and record keeping. An additional **\$6,000.00** is requested to support two undergraduate student researchers. The undergraduate students will work in Dr. Jones’ laboratory and learn experimental skills while assisting the Project Investigator (PI) and the research specialist in various aspects of the project.

2. FRINGE BENEFITS (Total) – Provide the rate of fringe benefits for each project participant’s salary described in the personnel section.

*Example*

**Fringe Benefits (\$9,585.00)**

The current fringe benefit rates at the University are 44.74% (**\$9387.00**) for the research specialist, 3.3% (**\$198.00**) for undergraduate students.

3. TRAVEL (Total) – Please provide the following information in the narrative if applicable: destination, purpose of trip, number of trips, number of people traveling, number of days traveling, estimated airfare costs, estimated ground transportation costs, estimated lodging and meal costs, total estimated mileage costs for the travel.
  - a. Travel expenses associated with the project shall follow the Arizona State Travel Policy as outlined in Section II-D of the State of Arizona Accounting Manual, which can be viewed at <http://www.gao.az.gov/publications/SAAM/default.asp>.

*Example*

**Travel (\$1,608.00)**

Totals funds of the **\$518.00** are requested for in-state travel to conduct field survey of PepMV in City X (2 overnight trips) and in City Y (2 day trips) and to attend the annual Agricultural Center Field Day (1 day trip). The total in-state travel cost will consist of car rental (7 days @ \$32.00/day), lodging (2 nights @ \$60.00), and meals (6 days @ \$29.00/day). In addition, **\$1,090.00** in out-of-state travel funds are requested to defray the travel expense for the PI or designee to attend and present their research findings at

the annual American Phytopathological Society meeting in Nashville, TN in 2013. The cost comprises of flight from City Z to Nashville (\$350.00), lodging (5 nights @ \$99.00), and food (5 days @ \$49.00/day).

4. EQUIPMENT (Total) –

This category includes tangible, nonexpendable, personal property having a useful life of more than one year and an acquisition cost that equals or exceeds \$5,000 per unit. All tangible personal property that does not qualify as EQUIPMENT must be included under SUPPLIES, including those items that cost less than \$5,000.

Provide an itemized list of equipment purchases or rentals, along with a brief narrative on the intended use of each equipment item, and the cost for all the equipment purchases or rentals.

Capital expenditures for general purpose equipment, buildings, and land are unallowable as direct and indirect charges.

- Capital Expenditures means expenditures for the acquisition cost of the capital assets (equipment, buildings, land), or expenditures to make improvements to capital assets that materially increase their value or useful life. Acquisition cost means the cost of the asset including the cost to put it in place. Acquisition cost for equipment, for example, means that the net invoice price of the equipment, including the cost of any modifications, attachments, accessories, or auxiliary apparatus necessary to make it usable for the purpose for which it is acquired. Ancillary charges, such as tax, duty, protective in transit insurance, freight, and installation may be included in, or excluded from the acquisition cost in accordance with the governmental unit's regular accounting practices.
- General Purpose Equipment means equipment, which is not limited to research, scientific or other technical activities. Examples include office equipment and furnishings, telephone networks, information technology equipment and systems, reproduction and printing equipment, and motor vehicles.
- Equipment means an article of nonexpendable, tangible personal property having a useful life of more than one year and an acquisition cost which equals or exceeds \$5,000.

Capital expenditures for special purpose equipment are allowable as direct costs, provided that items with a unit cost of \$5,000 or more have the prior approval of AMS. (Note: Prior approval from AMS occurs when the grantee has identified the purchase of special purpose equipment in the application, that purchase is included by ADA in the State Plan, and AMS has approved the State Plan. If special purpose equipment was not originally included in the approved State plan, then the grantee must request and receive approval from AMS (through ADA) to purchase the equipment before utilizing grant funds for that purpose.)

- Special Purpose Equipment means equipment which is used only for research, scientific, or other technical activities. Examples of special purpose equipment

include microscopes, spectrometers, and equipment which are used for a single purpose to solely enhance the competitiveness of eligible specialty crops and benefit the specialty crop industry and not a particular commercial product or provide a profit to a single organization, institution, or individual.

*Example*

**Equipment (\$5,000)**

For the purchase of a 96-well thermocycler to accommodate the large numbers of PCR-related experiments outlined in the project. The University donates the use of one ultra-high speed centrifuge, two high speed centrifuge, and three microcentrifuges, and one Biorad iCycler real-time PCR system (with a usage value of \$20,000.00) for the entire duration of the project as matching contributions for this project. All the equipment listed above is required for completion of the project.

5. SUPPLIES (Total) – This category includes all tangible personal property that does not qualify as EQUIPMENT, which may include anything from office supplies to educational or lab supplies. For non-typical materials and supplies items, include a brief narrative of how this fits with the project.

- a. Provide an itemized list and estimate the dollar amount for each item.

For example, office supplies such as pens, paper, toner, etc - \$500; Gardening supplies such as soil and fertilizer - \$500.

Items such as long distant charges, postage, fax and express mail or more appropriately listed under the “Other” category.

*Example*

**Supplies (\$4,446.00)**

Office Supplies (pro-rated) (\$1,235.00) for paper, color ink cartridges, toner and other supplies. Program Supplies (\$3,211.00) of which \$2,000 is for full-color promotional banners (@\$100 each) plus pro-rated amount of \$1,211 for cooking demonstration supplies, specialty seeds, harvest equipment, packaging and other materials.

6. CONTRACTUAL (Total) – Provide a short description of the services each contract covers. Indicate if the cost is flat rate fee or hourly. Indicate the flat rate fee or hourly rate to be applied.
  - If hourly rates exceed the salary of a GS-14 step 10 Federal employee in your area (for more information, please go to [www.opm.gov](http://www.opm.gov) and click on *Salaries and Wages*), please provide a justification. In preparing your justification, please select from the following situations and include in your detailed justification.
    1. A description of the steps you took to hire a contractor, which includes obtaining a cost/price analysis from at least three contractors who can perform the service. The purpose of the cost analysis is to review and

evaluate each element of cost to determine reasonableness. (Please provide company name and contract amount for each analysis.)

**OR**

2. Due to complexity or uniqueness of the project, the pool of available and qualified contractors is limited. Therefore, the selected contractor's specialized qualifications necessitate hiring at a rate beyond a GS-14 step 10. (Please outline the unique qualifications of the contractor.)

- List general categories of items the contract covers such as professional services, travel, lodging, etc.
- If the contract is for service or maintenance, costs should be in direct correlation to the use of the equipment for the project (i.e., if a particular copy machine is used 50 percent of the time for the project, the project should only be charged 50 percent of the service contract paid from Federal funds.)

*Example*

**Contractual (\$23,000.00)**

Stipends for GHP/GAP Video Shoot/Edit: flat fee stipends for 5 youth at \$2,000.00 each (\$10,000.00) to be coordinated through County Extension Youth Film Project. Youth will film and edit video in close collaboration with DA Staff and under supervision of SU Outreach Coordinator.

Online Toolkit Development and Adaption: this flat rate \$10,000.00 contract will take the online toolkit donated by University State X, and adapt it for DA use and web specifications. Any leftover funds will develop State-specific content for the toolkit.

Processing Study Analysis: this hourly rate \$3,000.00 (\$20/hr X 150 hrs) contract will analyze the production information on processing needs of growers and current availability of processing facilities and compile a report.

7. OTHER (Total) – Provide a detailed description of all other direct costs such as:
- Conference/Meeting – Costs of holding a conference or meeting are included in this category. Some examples are the rental of facilities or equipment for the meeting. Details of costs for each conference or meeting should be broken out and provided in the budget. Meals provided during the conference or meeting are **not** allowable costs.
  - Communications – Mailings, postage, express mail, faxes, and telephone long distance charges. Provide the estimated cost for this category.
  - Speaker/Trainer Fees – Provide the amount of the speaker's fees and a description of the services they are providing.
  - Publication Costs – Provide the estimated cost of printing the brochures and other program materials or scientific or technical journals as well as an estimate of the number of pieces to be printed/published.
  - Data Collection – Provide the estimated cost of collecting performance data to measure the project outcome measures.

*Example*

**Other (\$7,493.00)**

Advertising (8 display ads in Spanish-language media at \$162.50 each) (**\$1,300.00**); Printing/Copying (two color print jobs for promotional materials at \$650/each) (**\$1,300.00**); Communications (pro-rated as per project) (**\$1,733.00**); Equipment Rental (cooking demonstration cart) 4 uses @ 150 each (**\$600.00**); Postage for newsletter (pro-rated) (**\$760.00**); Staff Development and Training (two annual marketing workshops for two staff @ average \$450 each) (**\$1,800.00**).

8. PROGRAM INCOME (Total) –

- a. Indicate the nature or source of program income (e.g., registration fees).
- b. Estimate the amount of program income.
- c. Describe how the income will be used to further enhance the competitiveness of specialty crops.

If program income is earned, it must be used for 1) expanding the project or program; 2) continuing the project or program after the grant or sub grant support ends; and 3) supporting other projects or programs that further the broad objectives of the grant program. Program income may only be expended on allowable costs that solely enhance the competitiveness of specialty crops.

*Example*

**Program Income (\$4,750.00)**

Registration fee for 8 week workshop series - **\$2,500.00**

Apprentice fee - **\$2,250.00**

The income derived from this project will be reinvested into the project to support specialty crop farmer education and participation in future specialty crop workshops.

9. **Project Oversight** – The following questions and information should be addressed in this section:

- Who will oversee the project activities?
- How will oversight be performed? For example, will weekly or monthly meetings be held to discuss performance toward the completion of the project?
- How will the results of the project or the project itself be shared with the appropriate target audience(s)?

Absence or Change in Project Oversight - When a principal investigator or grant project contact plans to: relinquish active direction of the project for a period of more than three consecutive months, the Grantee shall submit a written notification (email is acceptable) to the SCBGP Coordinator. The notification shall contain the new principal investigator or grant project contact name as well as the approved project title and SCBGP-FB grant agreement number affected.

*Example*

The project will be overseen through well-established project management practices at the SCA Training Association. Primary oversight responsibility lies with the Food Systems

Program Manager, who has more than seven years experience with SCA with more than four years in her current position. Every SCA program uses Monitoring and Evaluation (M&E) Plan with distinct performance measures, benchmarks and success indicators established for 2-3 distinct projects in each. Another tool for project M&E is the Workshop Planning Template that guides the goals, design, target competencies and other objectives of grower workshops. This project will also use a process wherein partner organizations are required to both initially inform and perform under shared evaluation targets. The program manager reports monthly project performance and Healthy Local Foods committee will assess progress on a quarterly basis. The project and associated results will be shared with producers and the public through press releases, publications, presentations and workshops.

**10. Project Commitment** – Provide the following information in this section:

- What specialty crop stakeholder outside the lead organization support this project and how?
- How will all project stakeholders work toward the goals and outcomes of the project?

*Example*

The Farm Extension and Research Center is a successful collaboration between County Cooperative Extension and Economic Development, with support from State University’s College of Agriculture and Life Science as well as the Center for Environmental Farming Systems. The Farm Planning Committee includes representation from the partner institutions and agencies and has a monthly meeting schedule to plan and implement programs at the Farm. Programs during the past 2 years demonstrate a strong commitment to developing the capacity at the Farm and promoting educational activities that support farm viability.

**11. Multi-State Projects** – Provide the following information in this section if the project is a multi-state project:

- Which other states are participating?
- How will all States collaborate effectively?
- Has each state participating in the project submitted the project in their State Plan?
- Which State is taking the coordinating role (State will be responsible for performance reporting)
- What percent of the budget is covered by each State?

*Example*

Grant request: \$50,000

State A portion \$30,000

State B portion \$20,000

State A and State B will work together on the project through our 10 member board of directors. The board has members and associates serving on committees including research, advertising and promotions, market development, State A’s legislation, State B’s legislation, transportation, water and long range planning.

This project has the full support of both State A and State B Departments of Agriculture. State A will take the coordinating role in monitoring the progress of this project.

**II.D. Grant Application Webinar Workshops**

ADA staff may conduct SCBGP webinar workshops to present the grant program to potential applicants and provide information on how to apply for grant funds. You are strongly encouraged to participate as it will help assure that you have the most up-to-date information available. If you are unable to attend the workshop via the web, you may attend in person at the location listed below.

**NOTE: Please contact the SCBGP Coordinator to register at least one week prior to the workshop you plan to attend either via the web or in person. Instructions for web participation will be given upon registration.**

The dates, locations and times of the workshops are as follows:

<b>DATE</b>	<b>TIME</b>	<b>LOCATION</b>
February 22, 2012	9:00am – 11:00 am	Arizona Department of Agriculture 1688 West Adams Street Room 206 Phoenix, AZ 85007
February 29, 2012	2:00pm – 4:00 pm	Arizona Department of Agriculture 1688 West Adams Street Room 206 Phoenix, AZ 85007
March 6, 2012	1:00pm – 3:00 pm	Arizona Department of Agriculture 1688 West Adams Street Room 206 Phoenix, AZ 85007

## **II.E. Application Packet Due Date for Early Review**

You may submit your application early to be reviewed for **completeness only** by ADA staff. ADA staff will only review and verify that the grant application packet includes all items in the SCBGP-FB Checklist (Appendix A) and is therefore complete. All applications submitted for early review must be received by **5:00 p.m. on Friday, March 16<sup>th</sup>**. This will allow time for ADA to review the application and alert the applicant if any required information is missing. The applicant will then have the opportunity to submit the missing information prior to the final application packet due date.

## **II.F. Final Application Packet Due Date**

Remember, ADA's Agricultural Consultation and Training Program (ACT) must receive completed application packets no later than **5:00 p.m. on Tuesday, March 27<sup>th</sup>**. *This is not a postmark deadline; application packets must be received by the grant deadline date and time.* **Late application packets will not be accepted and will be returned unopened.** Application packets must be mailed or delivered to:

Specialty Crop Block Grant Program – Farm Bill  
Arizona Department of Agriculture  
Agricultural Consultation and Training Program  
1688 West Adams Street  
Phoenix, Arizona 85007

Grant applications submitted by the 5 p.m., March 27 deadline will be publicly opened, read and recorded beginning at 8:00 a.m. on March 28 at 1688 West Adams Street, Phoenix, Arizona.

## **II.G. Contact Information**

Lisa James  
SCBGP Grant Program Manager  
Arizona Department of Agriculture  
1688 West Adams Street  
Phoenix, AZ 85007  
Phone: (602) 542-3262  
E-mail: [ljames@azda.gov](mailto:ljames@azda.gov)  
Toll Free Outside Maricopa County: (800) 294-0308  
Fax: (602) 364-0830

Ashley Worthington  
SCBGP Grant Program Specialist  
Arizona Department of Agriculture  
1688 West Adams Street  
Phoenix, AZ 85007  
Phone: (602) 542-0972  
E-mail: [aworthington@azda.gov](mailto:aworthington@azda.gov)

### **III. Grant Awards and Reporting**

#### **III.A. Application Packet Evaluation and Selection Process**

ADA reserves the right to conduct an application screening process. Depending upon the number of applications submitted, at least three ADA staff may evaluate the proposals according to the Application Packet Screening Criteria (section III.B.). Applications that do not reach a certain threshold of points during the screening process will not receive further consideration for an award. Separate from this screening process, applications that are ineligible for an award for failure to comply with the requirements of this manual or the SCBGP-FB project eligibility requirements will also not receive consideration for an award.

All qualifying application packets will be evaluated by the SCBGP-FB Evaluation Team after the grant application packet submittal deadline. The Evaluation Team will be made up of at least three individuals with the appropriate background and expertise necessary to evaluate project proposals.

The Evaluation Team will first assess to what extent the proposed project (i) enhances the competitiveness of the specialty crop(s) benefiting from the project, (ii) clearly defines a challenge that is facing today's Specialty Crop industry and indicates a project which will assist in finding a solution, and (iii) is feasible. Based on these three criteria, the Evaluation Team will determine which projects will receive further consideration for funding. Neither the Evaluation Team, nor ADA is required to recommend funding a project that does not sufficiently satisfy these three criteria even if there are enough remaining grant funds to do so.

For those projects receiving further consideration, the Evaluation Team will use the SCBGP-FB Application Packet Rating Criteria listed in section III.C. to rate the application packets and make recommendations for funding to ADA's Director.

The SCBGP-FB Evaluation Team may adjust an application packet's project proposal, scope of work and/or project budget.

**Compliance and/or non-compliance of previous grantees with the requirements of their past Grant Award Agreements an evaluation criterion.** Compliance performance will be reported to the Evaluation Team. Negative past performance could jeopardize future funding.

ADA may ask a potential grantee for more information on any of the above Application Packet Requirements before awarding the grant or entering into an agreement with the grantee. ADA reserves the right to fund the project in part, add and delete tasks, and ask for clarification on the work plan, timeline, and budget. No agreement will be entered into until ADA is satisfied with all the specifications of the project. Any project proposal funding is dependent upon the availability of federal funds and the final approval from the USDA.

### III.B. Application Packet Screening Criteria

	Maximum Points	Points Received
<b>1. Problem Statement and Specialty Crop Context</b>	<b>10</b>	
Does the applicant define the problem the project is proposing to address? Does the project address the problem?		
<b>2. Project Work plan</b>	<b>10</b>	
How well do tasks relate to the goals and objectives? Is the timeline reasonable?		
<b>3. Project Description</b>	<b>10</b>	
How well does the applicant describe the project? How well does the applicant define the need for and purpose of the project?		
<b>4. Measurable Outcomes</b>	<b>15</b>	
Does the project include at least two measurable outcomes? How well will the proposed project allow the applicant to quantify and document the project's benefits and outcomes?		
<b>5. Potential Impact</b>	<b>15</b>	
Does the applicant clearly demonstrate how the project will have an impact on more than one grower? Does the project provide a direct benefit to and how effective the project will be at enhancing the competitiveness of Arizona specialty crops?		
<b>6. Project Commitment and Oversight</b>	<b>10</b>	
Does the applicant demonstrate a strong commitment to the success of the project?		
<b>7. Project Outreach and Sharing of Results</b>	<b>10</b>	
How well does the project describe a plan for sharing project results? Does the project clearly identify a target audience? Is the outreach plan feasible and effective?		
<b>8. Matching Funds and In-Kind Contributions</b>	<b>5</b>	
Are matching funds or in-kind donations provided or anticipated? How secure is the match?		
<b>9. Budget</b>	<b>5</b>	
Do the budget and budget narrative clearly show how each cost is necessary to the project?		
<b>10. Previous Compliance</b>	<b>10</b>	
How has the applicant complied with previous Grant Award Agreement requirements, including reporting requirements?		
<b>TOTAL</b>	<b>100</b>	

### III.C. Application Packet Rating Criteria

All grant application packets submitted during the fiscal year 2012 SCBGP-FB funding cycle, which are not deemed ineligible or eliminated through a screening process (see sections III.A. & III.B.), will be rated according to the following criteria:

Weight	Criteria	Rating
25%	To what extent will the proposed project enhance the competitiveness of the specialty crop(s) benefiting from this project?	0 to 10 with 0 being the lowest and 10 being the highest
25%	To what extent does the proposal clearly define a challenge that is facing today's Specialty Crop industry and indicate a project which will assist in finding a solution?	0 to 10 with 0 being the lowest and 10 being the highest
25%	How will the results of the project or the project itself be shared with the appropriate target audience(s)?	0 to 10 with 0 being the lowest and 10 being the highest
10%	Are matching funds or in-kind contributions being provided for the proposed project?	0 to 10 with 0 being the lowest and 10 being the highest
15%	Has the applicant complied with the Grant Award Agreement requirements of previous SCBGP or SCBGP-FB project(s), including reporting requirements? <i>Points will be reduced based on the severity of any compliance issue.</i>  Applicants who have not previously received SCBGP or SCBGP-FB grant funds will automatically receive the maximum rating of 10.	0 to 10 with 0 being the lowest and 10 being the highest

### III.D. Notification of Award

All eligible proposals will be reviewed. Successful proposals will be chosen on the merits of the project as they relate to the published criteria and will be included in the Arizona State Plan, which will be submitted to AMS. Applicants will be notified in writing whether or not their project is selected for inclusion in the Arizona State Plan. Funding is not guaranteed if the project is included in the State Plan. Following approval of the Arizona State Plan by AMS, applicants will be notified and sent a Grant Award Agreement to sign. ADA anticipates that grant awards and notifications will be made in late 2012.

*Please do not call ADA to check on the status of your application packet.*

After grant awards have been made, all application packets and the associated evaluations will be made available to the public. ADA may determine that trade secrets or proprietary information may continue to be held confidential. If you believe that any of the information contained in

your application packet should be held confidential, you must designate that information as “confidential” in your application packet and provide an explanation as to why it should be held confidential.

### **III.E. Reporting Awards and Executive Compensation**

ADA must report each action that obligates \$25,000 or more in SCBGP-FB funds for a grant to an entity, which is defined in 2 CFR Part 25, subpart C, to <http://www.fsrs.gov> in accordance with the FFATA.

Additionally, ADA must report the names and total compensation of a grantee’s five most highly compensated executives for the grantee’s preceding completed fiscal year if, but only if, (i) the grantee received \$25 million or more in annual gross revenues and 80% or more of its annual gross revenues from federal procurement contracts and certain federal financial assistance during the preceding fiscal year and (ii) the public does not have access to information about the compensation of the executives through SEC reports. Grantees meeting these conditions must provide the required information to ADA when they execute a Grant Award Agreement.

### **III.F. Grant Award Agreement and Payment**

Prior to beginning work on the proposed project or receiving funding, successful applicants will be required, as applicable, to provide a DUNS number (section I.H.), proof of registration with and participation in e-verify (section I.W.), and evidence of lawful presence (section I.X.). They will also be required to sign a Grant Award Agreement with the ADA indicating their intention to complete the proposed tasks and authorizing ADA to monitor the progress of the proposed project. The Grant Award Agreement will include provisions identified in sections I.L. – I.X. as well as reporting requirements.

Grant Award Agreements must be signed and returned to ADA within 30 days of receipt.

**Failure to submit an executed copy of the Grant Award Agreement within 30 days of receipt will result in the loss of awarded grant funds**, unless the delay was caused by circumstances outside the control of the grantee.

Grant Award Agreements may extend up to three years in duration depending on the type of project. **ADA staff will write your grant award agreement based on the information you provide, so it is important that you carefully complete the application packet.**

Requests for fund advances will be considered on a case by case basis. If a funding advance is requested, the need for the advance must be clearly stated in the project proposal. Refer to section I.F. for more details.

### **III.G. Reporting Requirements**

1. **Quarterly Performance Reports** - The Grantee shall submit the following documentation to the Program Coordinator within 30 days of the close of each quarter for the length of the project (see reporting schedule on Page 30).
  - a. A budget report
  - b. A signed activity report
  - c. A narrative report

The reports shall include, but are not limited to, budget expenditures, applicable in-kind (matching) expenditures, activity reports, and a brief narrative of the project’s progress, as applicable. **Failure to submit timely reports may result in the forfeiture of payment for that quarter and may affect the scoring of future grant applications.**

**Reporting Periods**

October 1 – December 31  
January 1 – March 31  
April 1 – June 30  
July 1 – September 30

**Report Due on or before**

January 31  
April 30  
July 31  
October 31

- 2. **Reimbursement** - Reimbursement requests may be submitted with each quarterly report or less frequently if no expenses have been incurred. The Grantee must obtain pre-approval from the Program Coordinator before any funds are reallocated within the approved budget.
- 3. **Annual Oral Presentations** - The Grantee shall make an annual oral presentation to ADA staff and other SCBGP stakeholders as scheduled by the SCBGP Coordinator.

The following information must be included in the Quarterly Performance Report

**Project Title**

**Activities Performed**

- Briefly summarize activities performed, targets, and/or performance goals achieved during the reporting period. Whenever possible, describe the work accomplished in both quantitative and qualitative terms. Include the significant results, accomplishments, conclusions and recommendations. Include favorable or unusual developments.
- Provide a comparison of actual accomplishments with the goals established for the reporting period.
- Present the significant contributions and role of project partners in the project.
- Clearly convey progress toward achieving outcomes by illustrating baseline data that has been gathered to date and showing the progress toward achieving set targets.
- If a target of a project has already been achieved, it is encouraged to amend the outcome measure. This permits the project staff to “stretch” the goals in order to go beyond what they are already doing.

**Problems and Delays**

- Note unexpected delays, impediments, and challenges that have been confronted in order to complete the goals for each project. Explain why these changes took place.
- Mention the actions that were taken in order to address these delays, impediments, and challenges.
- Review measurable outcomes to determine if targets are realistic and attainable. An objective that is too stringent should be scaled back and identified in the performance report.

Keep in mind that targets may slip due to all kinds of factors, such as employee turn-over and bad weather.

- In the event that the work plan timeline, expected measurable outcomes, budget, and/or methodology needs to be adjusted, provide an outline of those changes.

### **Future Project Plans**

- Briefly summarize activities performed, targets, and/or performance goals to be achieved during the next reporting period for each project. Whenever possible, describe the work accomplished in both quantitative and qualitative terms.
- Describe any changes that are anticipated in the project.

### **Funding Expended To Date**

- Provide information regarding the level of grant funds expended to date.
  - Provide information regarding the level of matching funds expended to date. (If applicable)
  - In the event that a project gained income as a result of planned activities, provide the amount of this supplemental funding and how it will be reinvested into the project.
4. **Final Performance Report** - A final report must be submitted to ADA by the Grantee no later than forty five (45) calendar days after the Agreement termination date. **Failure to submit timely final reports may result in the forfeiture of final payment and may affect the scoring of future grant applications.** The final report must be approved by ADA and AMS. ADA will not disburse final payment until all requirements of the Agreement have been fulfilled. All remaining grant funds or outstanding grant funds must be reconciled. The final narrative report shall address all points listed below and be suitable for dissemination to the public.

All Final Performance Reports will be posted on the ADA's website at <http://www.azda.gov/Main/PreviouslyFundedProjects.htm>. Industry representatives and stakeholders will be notified when reports are posted.

The following information must be included in the Final Performance Report

### **Project Title**

### **Project Summary**

- Provide a background for the initial purpose of the project, which includes the specific issue, problem, or need that was addressed by this project.
- Establish the motivation for this project by presenting the importance and timeliness of the project.
- If the project built on a previously funded project with the SCBGP or SCBGP-FB, describe how this project complimented and enhanced previously completed work.

### **Project Approach**

- Briefly summarize activities performed and tasks performed during the grant period. Whenever possible, describe the work accomplished in both quantitative and qualitative terms. Include the significant results, accomplishments, conclusions and recommendations. Include favorable or unusual developments.
- Present the significant contributions and role of project partners in the project.

### **Goals and Outcomes Achieved**

- Supply the activities that were completed in order to achieve the performance goals and measurable outcomes for the project.
- If outcome measures were long term, summarize the progress that has been made towards achievement.
- Provide a comparison of actual accomplishments with the goals established for the reporting period.
- Clearly convey completion of achieving outcomes by illustrating baseline data that has been gathered to date and showing the progress toward achieving set targets.

### **Beneficiaries**

- Provide a description of the groups and other operations that benefited from the completion of this project's accomplishments.
- Clearly state the quantitative data that concerns the beneficiaries affected by the project's accomplishments and/or the potential economic impact of the project.

### **Lessons Learned**

- Offer insights into the lessons learned by the project staff as a result of completing this project. This section is meant to illustrate the positive and negative results and conclusions for the project.
- Provide unexpected outcomes or results that were an effect of implementing this project.
- If goals or outcome measures were not achieved, identify and share the lessons learned to help others expedite problem-solving.

### **Contact Person**

- Name the Contact Person for the Project
- Telephone Number
- Email Address

### **Additional Information**

- How has the project enhanced the competitiveness and/or increased consumption of Arizona specialty crops?

- Provide additional information available (i.e. publications, websites, photographs) that is not applicable to any of the prior sections.

**Grantees will be required to make annual oral presentations and provide additional information as necessary throughout the entire AMS grant period of 3 years. Grantees are responsible for responding to any inquiries from the ADA.**

### **III.H. Amendments**

Grant Award Agreements shall only be modified by mutual written consent through a Grant Award Agreement Amendment executed by ADA and the Grantee. Unauthorized changes to Grant Award Agreements shall be void and without effect, and the Grantee shall not be entitled to any claim under this Agreement based on those changes.

Grant Award Agreements are intended to incorporate all provisions required by federal law. If the Department learns that a provision required by federal law has not been incorporated in the Agreement, the parties agree to promptly amend the Agreement to include the provision.

**Budget Adjustments** – If a project budget adjustment is needed during the project period, a written request may be made to ADA to reallocate budget funds between budget categories. However, the total budget amount as dictated by the approved grant award cannot be adjusted except as provided in section III.I. **No deviation from the approved budget will be allowed without prior approval by the Program Coordinator. If accumulative budget adjustments exceed 20% of the total budget, an amendment to the grant agreement will be necessary.**

**Unexpended Funds** – Grantees shall inform ADA of the potential for unexpended awarded grant funds as soon as the grantee is aware of the potential for unexpended funds, but no later than 60 days prior to the award expiration date.

### **III.I. Distribution of Unexpended Awarded Funds**

Unexpended awarded funds refer to awarded grant funds that grantees do not spend either because a grantee completed its project under budget or a grantee did not complete all aspects of the project covered by the grant award agreement. ADA reserves the right to use unexpended awarded funds to provide additional grant funds to other grantees who have current grant award agreements for projects covered by those agreements or to provide initial funding to applicants who had previously applied for funding but had not been awarded a grant due to lack of available funds. The Director will document in writing the specific justifications for any distributions of unexpended awarded funds made under this section.

## SCBGP-FB CHECKLIST

- One original, ten complete copies and one electronic copy on CD**  
(Adobe file for application cover sheet, Microsoft Word 97-2003 or 2007 file for the project proposal and budget narrative and Microsoft Excel 97-2003 or 2007 file for the budget) of application packet. **Only the original application must have an original signature.** The printed copy should be on white paper and fastened with a staple in the upper left-hand corner. Each copy should include the following:
  - Eligible Specialty Crop** (The commodity deriving benefit from the grant is eligible under the USDA-AMS “Definition of Specialty Crops”.)
  - Signed Application Cover Sheet** (Not more than one page. Only the original application must have an original signature.)
  - Project Proposal** (Not more than three pages), which includes the following (See page 11 of grant manual):
    - Abstract
    - Project Partner Organization
    - Project Purpose
    - Potential Impact
    - Expected Measurable Outcomes
    - Work Plan/Timeline
    - Project Oversight
    - Project Commitment
  - Budget and Budget Narrative** (Not more than two pages)

**COMPLETED APPLICATION DUE TO THE ARIZONA  
DEPARTMENT OF AGRICULTURE BY  
5:00 PM ON MARCH 27, 2012**

Specialty Crop Block Grant Program Application Cover Sheet

Information should be typed or printed clearly

Company/Organization Name: \_\_\_\_\_

DBA: \_\_\_\_\_

Grant Project Contact: \_\_\_\_\_  
Principal Investigator for Universities

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: \_\_\_\_\_ Cell: \_\_\_\_\_ Fax: \_\_\_\_\_

Email Address: \_\_\_\_\_

Grant Management Contact: \_\_\_\_\_  
Administration

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: \_\_\_\_\_ Cell: \_\_\_\_\_ Fax: \_\_\_\_\_

Email Address: \_\_\_\_\_

Tax ID: \_\_\_\_\_ DUNS # \_\_\_\_\_ DUNS # Applied For? Circle  
Yes No

County of Project: \_\_\_\_\_

Legislative District: \_\_\_\_\_ Congressional District: \_\_\_\_\_

Is this a multi-state project? Circle Yes No List partnering state(s): \_\_\_\_\_

Project Title (limited to **SIX** words): \_\_\_\_\_

Project Begin Date: \_\_\_\_\_ Project End Date: \_\_\_\_\_

Funding Amount Requested: \_\_\_\_\_

Specific Specialty Crop deriving benefit from grant (For example: "Iceberg Lettuce" instead of "Vegetables or "Lettuce."

\_\_\_\_\_

I hereby certify that the information in the application packet is true and correct to the best of my knowledge.

\_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Date:

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Date:

## Project Title -

<b>Funding Cycle FY12</b>	<b>Budget</b>	<b>Match</b>
<b>Personnel</b>		
	0.00	0.00
	0.00	0.00
<b>Total PS</b>	<b>\$0.00</b>	<b>\$0.00</b>
<b>Employee Related Expenses - Fringe Benefits</b>		
	0.00	0.00
	0.00	0.00
<b>Total ERE</b>	<b>\$0.00</b>	<b>\$0.00</b>
<b>In-State Travel</b>		
Lodging	0.00	0.00
Meals	0.00	0.00
Mileage	0.00	0.00
<b>Total In-State Travel</b>	<b>\$0.00</b>	<b>\$0.00</b>
<b>Equipment</b>		
	0.00	0.00
	0.00	0.00
<b>Total Equipment</b>	<b>\$0.00</b>	<b>\$0.00</b>
<b>Supplies</b>		
	0.00	0.00
	0.00	0.00
<b>Total Supplies</b>	<b>\$0.00</b>	<b>\$0.00</b>
<b>Professional &amp; Outside Services/Contractual</b>		
	0.00	0.00
	0.00	0.00
<b>Total P&amp;O</b>	<b>\$0.00</b>	<b>\$0.00</b>
<b>Other Operating Expenses</b>		
Other Operating Expenses	0.00	0.00
Education and training	0.00	0.00
Printing	0.00	0.00
Postage	0.00	0.00
<b>Total OOE</b>	<b>\$0.00</b>	<b>\$0.00</b>
<b>TOTAL PROJECT COSTS</b>	<b>\$0.00</b>	<b>\$0.00</b>

## RNA Vaccines to Manage Pepino Mosaic Virus

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### Applicant:

State University

### Abstract:

Partner with State University (the University) to explore the mechanisms of the induced resistance of Pepino mosaic virus in tomatoes and to develop novel immunization approaches to induce the resistance

### Project Partner Organization:

There are no partner organizations on this project.

### Project Purpose:

This one year project proposes to develop novel approaches to immunize tomato plants against Pepino mosaic virus (PepMV). Specific objectives are to determine if the naturally induced resistance in tomatoes is mediated by RNA-based immunity, develop two alternate vaccines that can effectively induce the resistance, protect tomato plants from PepMV, and eliminate the risk of late PepMV outbreaks.

Fresh tomato production in the U.S. is valued at \$1.4 billion annually. Tomato production, particularly greenhouse tomato production, has expanded rapidly within the State between 2004 and 2008. However, the emergence of PepMV as a pathogen poses a serious challenge to the tomato industry. Infection by the virus affects the quality of fruit and reduces its size, which results in up to 38 percent of the tomato fruit becoming downgraded.

Some tomato plants have been observed to recover naturally from an early infection. These plants then exhibit neither the symptoms nor the effects of PepMV infection, and continue to produce normal tomato fruit without yield loss, as if they have become resistant. Scientists have observed similar recoveries from viral infections in other plant species. Studies in the last decade have revealed that this type of recovery is due to RNA interference (RNAi). RNAi has the ability to detect and degrade invading viral and other nucleic acids. If the recovery of tomato plants from an early PepMV infection is indeed a manifestation of RNAi-based resistance, it opens up the possibility of immunizing tomato plants with a sequence fragment or an attenuated strain of PepMV.

The University presently has received matching funds from the USDA Special Projects Grant Program to provide one-half salary for the Senior Research Specialist. This individual will coordinate most of the laboratory operations and perform a majority of the laboratory and greenhouse experiments. This project will not be a duplicative effort, but rather enhance the program by providing additional dollars to elevate the part-time position to full time status.

### Potential Impact:

With 3,808,556 cartons produced in 2008, the tomato is one of the top ten commodities in the State. Diseases and pests have caused major problems for fresh tomato production in the State, resulting in financial hardship for some growers. Smaller growers are facing these problems as well. Developing effective and practical means to control PepMV, as proposed in this project, will provide timely and much needed assistance to the State tomato growers. By managing the viral disease, growers will be able to improve tomato yield and quality, consequently increasing

profits. In turn, these operations will attract more businesses to the State, making the State's tomato industry more competitive.

### Expected Measurable Outcomes:

Characterize the natural resistance of tomatoes to PepMV and develop a vaccine to protect tomato plants from PepMV (**GOAL**) in fresh tomato production. No such knowledge and technology currently exist (**BENCHMARK**). To disseminate this new knowledge and technology, research findings will be presented to over 100 growers at the 2013 annual Agricultural Center Field Day and over 1500 scientists at the 2013 annual American Phytopathology Meeting (**TARGETS**). The success of the project will be measured by attendance (**PERFORMANCE MEASURE**) at both meetings.

### Work Plan:

Project Activity	Who's Responsible	Timeline
Determine if RNAi is involved in the natural resistance	University Researchers and Students	Sept. 2012 – Jan. 2013 (Begin)
Construct an infectious cDNA clone for PepMV	University Researchers and Students	Oct. 2012 – Jan. 2013
Construct an RNA immunization vector	University Researchers and Students	Jan. 2013 – Feb. 2013
Develop an attenuated PepMV strain	University Researchers and Students	Jan. 2013 – May 2013
Test the efficacy of the immunization vector	University Researchers and Students	March 2013 – June 2013
Test the protection of tomato plants using the attenuated PepMV strain	University Researchers and Students	June 2013 – Aug. 2013
Results presentation at APS	Project Investigator	Aug. 07-10, 2013
Results presentation and dissemination at AC field day	Project Investigator	Nov. 6, 2013 (End)

**Budget Narrative (Total \$63,523.00):**

<b>Funding Cycle FY12</b>	<b>Budget</b>	<b>Match</b>
<b>Personnel</b>		
PI Dr. Jones (.20 FTE)	\$0.00	\$13,554.80
Research Specialist, Senior (.05 FTE)	21,000.00	0.00
Undergraduate Students, 2, part-time	6,000.00	0.00
<b>Total PS</b>	<b>\$27,000.00</b>	<b>\$13,554.80</b>
<b>Employee Related Expenses - Fringe Benefits</b>		
PI Dr. Jones (28.9% ERE)	0.00	3,917.34
Research Specialist, Senior (44.7% ERE)	9,387.00	0.00
Undergraduate Students, 2, part-time (3.3% ERE)	198.00	0.00
<b>Total ERE</b>	<b>\$9,585.00</b>	<b>\$3,917.34</b>
<b>In-State Travel</b>		
Lodging	120.00	0.00
Meals	174.00	0.00
Mileage	224.00	0.00
<b>Total In-State Travel</b>	<b>\$518.00</b>	<b>\$0.00</b>
<b>Out-State Travel</b>		
Lodging	495.00	0.00
Meals	245.00	0.00
Mileage	350.00	0.00
<b>Total In-State Travel</b>	<b>\$1,090.00</b>	<b>\$0.00</b>
<b>Supplies</b>		
Supplies	14,830.00	0.00
<b>Total Supplies</b>	<b>\$14,830.00</b>	<b>\$0.00</b>
<b>Other Operating Expenses</b>		
Publications	2,500.00	0.00
Greenhouse Rental	3,000.00	0.00
<b>Total OOE</b>	<b>\$5,500.00</b>	<b>\$0.00</b>
<b>Equipment</b>		
PCR thermocycler, Real-time PCR iCycler	5,000.00	0.00
<b>Total Equipment</b>	<b>\$5,000.00</b>	<b>\$0.00</b>
<b>TOTAL PROJECT COSTS</b>	<b>\$63,523.00</b>	<b>\$17,472.14</b>

**Personnel (\$27,000.00)**

Expenses of \$21,000.00 are requested for one half-time Senior Research Specialist (0.5 FTE) who will coordinate most of the laboratory operations and perform a majority of the laboratory and greenhouse experiments. Additionally, the specialist will be responsible for data entry and record keeping. An additional \$6,000.00 is requested to support two undergraduate student researchers. The undergraduate students will work in Dr. Jones' laboratory and learn experimental skills while assisting the Project Investigator (PI) and the research specialist in various aspects of the project.

**Fringe Benefits (\$9,585.00)**

The current fringe benefit rates at the University are 44.74% (\$9,387.00) for the research specialist, 3.3% (\$198.00) for undergraduate students.

**Travel (\$1,608.00)**

Total funds of \$518.00 are requested for in-state travel to conduct field surveys of PepMV in City X (2 overnight trips) and in City Y (2 day trips) and to attend the annual Agricultural Center Field Day (1 day trip). The total in-state travel cost will consist of car rental (7 days @ \$32.00/day), lodging (2 nights @ \$60.00), and food (6 days @ \$29.00/day). In addition, \$1,090.00 in out-of-state travel funds are requested to defray the travel expense for the PI or designee to attend and present their research findings at the annual American Phytopathological Society meeting in Nashville, TN in 2010. The cost comprises of flight from City Z to Nashville (\$350.00), lodging (5 nights @ \$99.00), and food (5 days @ \$49.00/day).

**Equipment (\$5,000.00)**

For the purchase of a 96-well thermocycler to accommodate the large numbers of PCR-related experiments outlined in the project. The University donates the use of one ultra-high speed centrifuge, two high speed centrifuges, and three microcentrifuges, and one Biorad iCycler real-time PCR system (with a usage value of \$20,000.00) for the entire duration of the project as matching contributions for this project. All the equipment listed above is required for completion of the project.

**Supplies (\$14,830.00)**

The cost of greenhouse supplies for growing tomato plants are estimated at \$500.00. This includes 400 pots, soils (10-50 lb bags), and fertilizers (Osmocote, 5 lb). Laboratory supplies including chemicals, biochemicals, molecular biology reagents, enzymes, columns for RNA and DNA isolations, plant and bacterial media, plastic- and glass-ware, gel boxes and trays, are estimated at an average cost \$1,000.00 per month (\$12,000.00 per year). Funds are also requested for two sets of Gilson Pipetteman (each set consisting of 4 pipettes ranging from 1  $\mu$ l to 1000  $\mu$ l, \$1,165.00 for each set), totaling \$2,330.00.

**Other (\$5,500.00)**

A total of \$2,500.00 is requested to defray partial costs of publishing the results generated from the project. In addition, \$3,000.00 is requested for rental of the transgenic greenhouse at the University Agricultural Center (\$250.00 per month) which is necessary to carry out experiments on tomato plants.

**Matching Funds**

The University will contribute \$17,472.14 to this project, which consists of 20% of the PI's salary and fringe benefits.

**Project Oversight:**

The PI has extensive experience working with RNA viruses, RNAi-mediated viral resistance in plants, and molecular characterization of viral genes and functions. The experiments outlined in this project are well within his area of expertise. The PI will direct and implement the project. Weekly meetings will be held between the PI, a research specialist, and other lab members involved in this project to assess its progress, and quarterly progress reports will be posted on the proposed website. The PI will periodically consult with the Departmental Business Manger to ensure that expenditures remain within budget categories and that funds are spent appropriately.

**Project Commitment:**

The project PI, will commit 0.2 FTE to administer the project, to supervise and conduct proposed experiments, to perform required data analyses, and to communicate research progress and findings to the sponsoring agency. Additionally, 1 FTE research specialist and two part-time undergraduate researchers will work on the proposed project. The administrative personnel at The University have extensive expertise in overseeing and administering contracts and grants from a variety of organizations.

## Enhancing Sustainable Specialty Crop Production

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### Applicant:

Farm Extension & Research Center

### Abstract:

Support training and field activities for farmers in a twenty-two county area in the northwest part of the State, which includes sustainable soil and water management, insect, disease, and weed management, fruit and berry applied research, and business planning.

### Project Partner Organization:

There are no partner organizations on this project.

### Project Purpose:

The retail and wholesale demand for local and sustainable vegetables, fruit, and greenhouse crops is currently growing at a rate of 10 to 20 percent per year. In addition, consumer demand is strong for direct-from-the-farm products through farm stands, pick your own operations, community supported agriculture programs, and internet based sales. Yet, resources for hands-on training of new and diversifying farmers are limited and must be increased to satisfy increased demand.

The Farm Extension & Research Center and its flagship plant are capable of utilizing grant funds to enhance its current program offerings of 1) an intensive 8-week specialty crop workshop series and 2) an ongoing workshop series for specialty crop farmers in a 22-county area in the northwest region of the State. This would be a new endeavor, which has not received any other Federal or State grant funds.

### Potential Impact:

Programs at the Farm reach out to a diverse group of participants:

- Tobacco farmers who are interested in diversifying to specialty crops
- Row crop, dairy, and beef farmers interested in diversifying to specialty crops
- Young farmers who do not have access to land or sufficient capital but are interested in organic & sustainable specialty crop farming
- Other traditional farmers who want to diversify
- Persons who want to farm as a second career
- Persons who want to farm in retirement

Based on the business plans developed by the enterprises at the Farm, average gross revenue was estimated at \$9,000 per acre. Given the early stage of the farm enterprises, it is likely that gross revenue will be greater than estimates in the first 3 to 5 years of operations. The program will conduct periodic surveys of all program participants and farm enterprises and request voluntary reporting of farm income related to the training program. In addition, gross revenue can be used to estimate infrastructure costs which are likely 2 to 3 times greater than gross revenue. The economic multiplier of infrastructure costs help to create economic activity for local farm supply businesses which helps keep farming communities to continue to thrive and allows farm supply businesses to remain profitable.

There are two levels of service that the program provides. One level is for the workshop series and apprentice farmers. A second level of service is for participants that wish to participate in individual workshops, mentor farmer presentations and field walks, as well as other demonstration activities. It is estimated that over the three years of this project:

- At least 50 individuals will participate in the 8-week workshop series
- At least 75 individuals will participate in the independent workshops
- At least 5 enterprises will be created at the Farm Enterprise program
- At least 20 enterprises will be enhanced on participant-owned farms through participation in 8-week workshop series

### Expected Measurable Outcomes:

<b><u>Goal 1:</u></b>	Conduct 8-week workshop series in 2013 to at least 50 individuals for each workshop
<b>Performance measure:</b>	Registration records, weekly attendance records, and pre and post workshop self-assessment knowledge evaluations
<b>Benchmark:</b>	Determine pre-training self-assessment tools (see attached)
<b>Target:</b>	Mean increase in specific knowledge areas will increase 40%
<hr/>	
<b><u>Goal 2:</u></b>	Conduct 3 independent workshops in 2013 to be developed based on feedback from Goal 1 to at least 30 individuals for each workshop
<b>Performance measure:</b>	Registration records, attendance records, and pre and post workshop evaluation (see attached)
<b>Benchmark:</b>	Determined by workshop evaluation
<b>Target:</b>	At least 50% of participants will use knowledge gained to improve or enhance their farm-related enterprise

### Work Plan:

The Farm will use grant funds to support training and field activities that include sustainable soil and water management, insect, disease, and weed management, applied fruit and berry research, business planning, and development of enterprise budgets for new and diversifying farmers. The Farm will also contract with a part-time mentor farmer to reinforce the mentoring capacity of the program and allow for targeted expansion of trainings and workshops.

Support for apprentice farmers will include field preparation, fertilization with and incorporation of litter, field preparation for bedding, as well as bed shaping with drip tape, with/without plastic. Ongoing support will be provided to growers in market development, production issues, and farm infrastructure. In addition, apprentice farmers will be providing educational support through field walks and other demonstrations.

<b>Project Activity</b>	<b>Who's Responsible</b>	<b>Timeline</b>
Develop criteria and solicit applications for Mentor Farmer position	Planning Committee	Sept. – Dec. 2012
Plan 8-wk training series	Planning Committee	Sept. – Dec. 2012
Plan Workshops	Planning Committee	Sept. – Dec. 2012
Contract with Mentor Farmer	Planning Committee	Jan. – Mar. 2013
Conduct 8-wk training series	Planning Committee	Jan. – Mar. 2013
Annual Purchase of Supplies	CED & Smith	Jan. – Mar. 2013
Conduct Workshops	Planning Committee	Jan. – Sept. 2013
Evaluate training series	Planning Committee	Apr. – June 2013
Evaluate Workshops	Planning Committee	July – Sept. 2013
Annual/Final Report	CED & Smith	July – Sept. 2013

### Budget Narrative (Total \$22,800.00):

<b>Funding Cycle FY12</b>	<b>Budget</b>
<b>Supplies</b>	
Garden Supplies	\$17,800.00
<b>Total Supplies</b>	<b>\$17,800.00</b>
<b>Professional &amp; Outside Services/Contractual</b>	
Mentor Farmer	\$5,000.00
<b>Total P&amp;O</b>	<b>\$5,000.00</b>
<b>TOTAL PROJECT COSTS</b>	<b>\$22,800.00</b>
<b>Program Income</b>	
Registration Fees	\$2,500.00
Apprentice Fee	2,240.00
<b>Total Program Income</b>	<b>\$4,740.00</b>

Program Income will be reinvested into the program to support specialty crop farmers and help sustain and grow the project.

### Supplies (\$17,800.00)

These funds will purchase items under \$5,000 that are needed for training programs on fruit, berry, and vegetable production at the Farm Extension & Research Center

<b>Item</b>	<b>Justification</b>	<b>Cost</b>
Bedder	Planting Bed Preparation	\$ 1,500
Cool Bot/Walk in Cooler	Post Harvest Cooling of Produce	\$ 2,000
Cultivator	Tillage and Cover Crop Incorporation	\$ 1,200
Hand Tools	Crop Production and Weed Management	\$ 900
Hoop House	Season Extension	\$ 4,400
Irrigation Supplies	Upgrade Pump and Drip Irrigation System	\$ 1,100
Mulch Layer	Weed Management of Beds	\$ 1,500
Mulches, Biodegradable and Plastic	Weed Management of Beds	\$ 1,300
Rotary Mower	Weed and Cover Crop Management	\$ 1,800
Tiller	Planting Bed Preparation	\$ 2,100
		\$ 17,800

### **Contractual (\$5,000.00)**

A mentor farmer will be hired as a contractor at a flat rate to provide regular and consistent guidance to workshop participants and apprentice farmers. These activities will take place during the 8 week workshop.

### **Program Income (\$4,750.00)**

Registration Fee for 8 week workshop series - \$2,500

Apprentice fee - \$2,240

The income derived from this project will be reinvested into the program to support specialty crop farmers and help sustain and grow the project.

### **Project Oversight:**

The County Extension Director, Dr. Brown will be responsible for project oversight, with assistance provided by Dr. Smith, County Agricultural Economic Development Coordinator. Both individuals serve on the Planning Committee which has a monthly meeting schedule that will enable activities to be implemented in a timely manner.

### **Project Commitment:**

The Farm Extension and Research Center is a successful collaboration between County Cooperative Extension and Economic Development, with support from State University's College of Agriculture and Life Science as well as the Center for Environmental Farming Systems. The Farm Planning Committee includes representation from the partner institutions and agencies and has a monthly meeting schedule to plan and implement programs at the Farm. Programs during the past 2 years demonstrate a strong commitment to developing the capacity at the Farm and promoting educational activities that support farm viability.

## Training to Increase Local Fruit and Vegetable Production at the Local Market

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### Applicant:

Specialty Crop Extension Organization

### Abstract:

Educate current and potential farmers about transitioning to specialty crop production for local consumption.

### Project Partner Organization:

There are no partner organizations on this project.

### Project Purpose:

In order to meet the growing demand for locally-produced, fresh fruits and vegetables in the local area, the project will support farmers that plan to convert to specialty crops by providing educational workshops and field visits to commercial vegetable/fruit farms and field trips to the State University Research and Extension Center. Particularly, the focus will be on these growers need of an agricultural enterprise that can reliably generate profit. A successful transition to a comparable crop is needed to ensure that the economic well-being of these growers is preserved. Local producers in the State were dealt an unpleasant hand last year, when their longtime buyer, Corporation A, informed the State producers that no further contracts would be issued in the State. This created uncertainty in the establishment of a buyer willing to pay a fair price for local crops. The 2007 USDA Census of Agriculture reported that at least 25 percent of the State's crop production will be affected by this change in purchaser. As such, Corporation A's withdrawal will have an incredible impact on the value of agricultural production for this area of the State.

Fortunately, the growth in the number of farmers' markets and community supported agriculture ventures in this region currently outpaces the national average and local retailers and institutional buyers continue to seek locally grown fruits and vegetables. In fact, some producers are dabbling in specialty crops like sweet corn and melons, which increasingly requires a strong educational effort to inform these farmers of the challenges that they will face in their transition. This project has not been submitted for funding elsewhere.

### Potential Impact:

The local fresh fruit and vegetable market is far from saturated and this project has the potential to impact not just participating farmers, but also local consumer markets throughout the west-central region of the State. Specifically, the farmers/potential producers that participate in the project will directly be impacted by becoming more knowledgeable about production practices and marketing options. There are currently more than 150 producers in the State, and 100 of these growers are members of the Commodity of America (CA) and/or the Growers Association (GA). Also, 40 new producers (not members of CA or GA in the State) have been identified. Because the value of specialty crops in comparison to traditional row crops is considerably higher, participants that elect to pursue fruit/vegetable production over other on-farm enterprises will increase their profit potential, thereby increasing their quality of life. Most importantly, former producers will become more confident in their ability to produce and market crops with a similar economic value.

### Expected Measurable Outcomes:

Participants will become more knowledgeable about production practices of various specialty crops including vegetables and fruit (**GOAL**). They will also increase their awareness of specialty crop marketing opportunities. Currently, there is not any **BENCHMARK** data to compare this increase in knowledge or awareness; therefore, these short-term outcomes will be measured through a pre- and post-assessment of the participants' knowledge and awareness concerning production practices and marketing. We plan to achieve an increase of 75 percent in both knowledge and awareness (**TARGET**). These surveys will utilize multiple choice and yes/no questions as well as the Likert Scale in order to collect data (**PERFORMANCE MEASURE**).

### Work Plan:

There are two primary parts of this project: 1) Educational Workshops held at the County University Extension Center, and 2) Two in-season Field Visits to commercial vegetable/fruit farms and Field Trips to the State University Research and Extension Center. Additionally, participants in the project will be granted admission to the 2013 Specialty Crop Conference.

#### Workshops (November and December 2012)

The workshops will be a concerted effort on the part of the Extension's multidisciplinary faculty, other state institutions dedicated to nurturing the furtherance of State specialty crop production (University Extension), and industry personnel. There will be a total of three 4 hour workshops.

The first workshop will cover production practices for specific specialty crops commonly seen in the local food market (corn, tomatoes, beans, melons, etc.) Participants will gain a fundamental understanding of the production schedules for these crops from transplant production to harvest. University Extension Specialists committed to presenting information on production practices and profitability include Dr. Joe Smith, Horticulture Specialist, and Dr. Jane Smith, Horticulture Specialist.

The second workshop will introduce alternative agriculture products with additional information concerning high tunnel technology. Participants will become familiarized with a host of alternative commodity (i.e. Aronia berries, ethnic vegetables, etc) production through high tunnel technology. The high tunnel ability to extend production seasons and protect crops from environmental stresses makes them practically an essential tool for sustainable, local food producers. Industry personnel that have committed to this workshop include: Mr. Bob Smith and Ms. Betty Smith of Corporation B.

The third workshop will cover numerous market opportunities to sell specialty crops: specifically, farmers markets, on-farm sales, wholesale distribution, and cooperatives. Participants will increase their understanding of the variety of avenues available to specialty crop producers for selling their products. The University Extension Specialists committed to presenting information at this workshop is Ms. Mary Smith, Community Development Specialist. The industry personnel committed to this workshop is Mr. Mark Smith of Corporation C.

#### Field Trips (June and July 2013)

There will be two in-season field trips to commercial vegetable/fruit farms. Participants will observe operations and gain a more complete understanding of commercial vegetable/fruit operations. This is a fundamental part of the project because many growers have indicated that

they are more likely to enter into specialty crop production after they have been educated and after they have seen examples of how it is done.

### **Farm Visits (May 2012)**

There will be two other visits to specialty crop marketing and production sites. The first visit will be to the State University Research and Extension Center to learn about specialty crop production equipment. This trip will coincide with the May session of the Growing Growers Workshop Series. The second trip in May will be to the local produce auction site. Participants will watch as local produce and other local items are auctioned off. The auction manager has agreed to visit with the group about the auction process as well. In addition to seeing the produce auction, the Horticulture Specialist (Dr. Joe Smith) arranged two stops at specialty crop farms to visit with current growers.

### **Vegetable Growers' Conference (January 2014)**

To supplement the education received during the workshops, participants will be granted full admission to the Vegetable Growers' Conference. This conference is coordinated by the Horticulture Specialists of State University Extension, and state specialists from four other regional universities. At this conference, participants will have the opportunity to immerse themselves into specific areas of production, harvesting, and marketing, as well as have the chance to network with fellow growers.

**Project will begin in September 2012 and end in January 2014.**

### **Budget Narrative (\$11,520.30):**

<b>Funding Cycle FY12</b>	<b>Budget</b>
<b>Personnel</b>	
University Extension Specialist (Dr. Joe Smith .10 FTE)	1,600.00
University Extension Specialist (Dr. Jane Smith .05 FTE)	943.00
<b>Total PS</b>	<b>\$2,543.00</b>
<b>Employee Related Expenses - Fringe Benefits</b>	
University Extension Specialist (Dr. Joe Smith 29.05% ERE)	465.00
University Extension Specialist (Dr. Jane Smith 29.05% ERE)	274.00
<b>Total ERE</b>	<b>\$739.00</b>
<b>In-State Travel</b>	
Mileage	1,463.30
<b>Total In-State Travel</b>	<b>\$1,463.30</b>
<b>Supplies</b>	
Notebooks	\$200.00
<b>Total Supplies</b>	<b>\$200.00</b>
<b>Other Operating Expenses</b>	
Evaluation Costs	\$100.00

<b>Funding Cycle FY12</b>	<b>Budget</b>
Education and Training	6,400.00
Printing	75.00
<b>Total OOE</b>	<b>\$6,575.00</b>
<b>TOTAL PROJECT COSTS</b>	<b>\$11,520.30</b>

**Personnel (\$2,543.00):**

University Extension Specialists Dr. Joe Smith and Dr. Jane Smith seek salary recovery consistent with their estimated time of commitment to the project. Dr. Joe Smith's estimated time spent on the project is 0.1 FTE (\$1,600), and Jane Smith's estimated time spent on the project is 0.05 FTE (\$943).

**Fringe Benefits (\$739.00):**

State University's negotiated federal fringe rate is 29.05% of salary costs: Dr. Joe Smith, Horticulture Specialist (\$465); Dr. Jane Smith, Horticulture Specialist (\$274).

**Travel (\$1,463.30):**

The estimated mileage for each speaker/coordinator is broken down by workshop. Mileage for these speakers is figured at the state rate of \$0.445/mile traveled. Speakers will not be granted reimbursement for meals.

*Workshop 1:*

There will be a speaker from City A (320 miles roundtrip) as well as two speakers and 1 coordinator traveling separately from City B (60 miles roundtrip per person) (\$222.50).

*Workshop 2:*

There will be a speaker from City C (290 miles roundtrip) and two speakers travelling together from City B (60 miles roundtrip). Also, two coordinators will travel separately from City B (60 miles roundtrip per person) (\$209.15).

*Workshop 3*

There will be a speaker from City C (290 miles roundtrip), a speaker from State B (240 miles roundtrip), a speaker from City A (320 miles round trip), as well as a speaker and coordinator travelling separately from City B (60 miles roundtrip per person) (\$431.65).

It is estimated that approximately 25 farmers/potential farmers would participate in the trip to the produce auction. The round trip travel from City B to City D is estimated to range from \$600-\$850. We have planned for the lowest end of those estimates and request \$600 to cover the cost of chartering a bus. Though this trip will be over the lunch hour, we will require that participants be responsible for their own lunch.

**Supplies (\$200.00):**

Because we want the information that is presented to the participants to be readily available to them and in one place, we will purchase forty notebooks at \$5 (\$200).

**Other (\$6,575.00):**

Workshop expenses will include the price of extension publications as reference materials, and printing expenses incurred by the University Extension. The facility is free for us to use. Extension publications for 40 participants will cost \$200. Printing costs incurred by the University Extension for presentations and other resources is estimated to be \$75.

For evaluation purposes, the expenses incurred for stationary, printing, and postage is estimated to be **\$100**.

The Vegetable Growers' Conference is a three-day conference where participants will be granted admission to the conference; however, they are responsible for their own travel, accommodation, and meals. A community supported agriculture session will be held on Thursday (\$65), while a wide array of breakout sessions will be held on Friday and Saturday (\$35 each). It is estimated that there will be 40 participants for this conference (**\$5,400**).

Our effort to publicize the project will encompass a variety of avenues including print, radio, and electronic forms of communication. Flyers will be produced to highlight the schedule of activities and solicit registrations. The cost for producing the flyers will be incurred by the University Extension (**\$200**).

The Growing Growers workshop is held at the State University Horticulture Research and Extension Center outside of City F where participants (40) can see demonstrations of various production practices. Participants will be responsible for their own transportation to this event. Registration for this workshop is \$15 per participant (**\$600**).

### **Project Oversight:**

State University currently monitors more than \$200 million in grant expenditures from federal, state and other sources. It maintains a post award staff at division and system levels (in addition to many department levels) to ensure that expenses incurred are appropriate, allocable and allowable. The University conforms to state and federal compliance regulations such as the cost principles for college and universities (2 CFR 220 – OMB Circular A-21). The activities for the project will also be overseen by University Extension Specialists. Dr. Joe Smith and Dr. Jane Smith regularly host workshops and work with producers on a daily basis. Smith will be responsible for project advertisement, production of handouts, meals for workshops, evaluation, travel arrangements, and organizing the workshops. Smith will work with Smith in advertising and evaluating the project, organizing the workshops, and will be responsible for arranging field visits to commercial farms.

### **Project Commitment:**

The University Extension is dedicated to increasing the quality of life all these growers over the course of this project. Specifically, the Extension field staff is very committed to seeing that these growers can replace their income. The team of educators that have already been identified readily communicated their interest in participating in this project. By bringing together Extension, the State, and industry personnel for this common goal, we feel that we can deliver a high-caliber program that complements the capacity of local agents.

## Farm-to-School: Building New Markets for Specialty Crops in Schools

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### Applicant:

State Department of Agriculture Farm to School Program

### Abstract:

Develop an online toolkit and conduct farm-to-school workshops for foodservice buyers and staff on how to purchase and prepare local fruits and vegetables; provide classroom resources to educate students about the benefits of eating fruits and vegetables; conduct grower trainings to assist specialty crop producers in selling to institutional markets; develop resources and hold events to help farmers to understand and prepare for Good Agricultural Practices (GAPs) food safety certification as required by many schools and foodservice companies; and survey farmers and processor to inventory the current capacity for post-harvest processing required to meet the school foodservice market.

### Project Partner Organization:

There are no partner organizations on this project.

### Project Purpose:

School buyers often require processed products, due to labor or facilities constraints, yet farmers may have limited knowledge of or access to necessary processing facilities. Farmers could expand their markets by producing value-added, consumer ready products but do not have the processing equipment, skills or resources to manufacture their own products and need processors who can help develop and manufacture these products. However, farmers need guidance as to the opportunities and requirements for selling to schools. In addition to processing and food safety requirements, few farmers are aware of the purchasing procedures of schools.

Schools also need training on purchasing from farms or smaller distributors and on building menus that cost-effectively use seasonal produce. Local schools also increasingly require Good Agricultural Practices/Good Handling Practices (GHP/GAP) certification from farm vendors as assurance that the crops were grown in accordance with recognized standards to minimize health risks. Consequently, local small/medium sized farmers need to continue GHP/GAP audit training in order to compete with larger corporate farms.

Currently, there are not any funded or implemented projects that benefit this situation. It is also important to note, that although meats, grains, and other non-specialty crop commodities will be included in this project, the project staff have utilized other funding sources to provide matching funds. The project staff will document all funds to ensure that Specialty Crop Block Grant Program funds are only utilized to enhance the competitiveness of specialty crop commodities.

### Potential Impact:

The State is a major producer of fruit and vegetables. Consequently, the State's specialty crop producers will be broadly impacted by the implementation of this project. There are approximately 10,000 small (less than \$250,000 in sales) and medium sized (\$250,000 to \$1 million) fruit and vegetable growers will benefit from this project; however, food processors, distributors, and others involved with providing specialty crop foods will also benefit.

Schools on the other hand represent new market opportunities for these farmers where they may be able to sell their crops directly and receive full value. The State's schools participating in the National School Lunch Program served approximately 85 million lunches in the 2007 academic year and an additional 26 million breakfasts. They spent over \$350 million dollars on school food, associated costs, and labor. An additional \$1.6 million was spent in 2009 on fresh fruit and vegetables as part of the USDA Fresh Fruit and Vegetable Program and the State Grown Fruit and Vegetable Program.

Experience shows that eating habits developed at school age carry on into adulthood. It is expected that exposure to more fruit and vegetables in school, as opposed to highly processed foods, will continue and increase demand for these products in the future. Indirectly, schools and students will be beneficiaries. Students will benefit from improved nutrition and health if more fruit and vegetables are included in their diets.

### Expected Measurable Outcomes:

#### **OUTCOME #1: Increase in schools buying direct from specialty crop growers.**

The **GOAL** of this project is to expand the market for State-grown specialty crops in schools. **BENCHMARK** data comes from a survey conducted in 2011, which requested information from all 295 school nutrition directors in the State. The survey indicated that twenty-nine districts directly purchased from local producers in the past year (2010). Data will also be collected from, the Office of the Superintendent of Public Instruction, purchasing records for the State Grown Fruits and Vegetable grants to learn how many and what farms are selling to these schools, and which specialty crops are proving to be popular in schools. The **TARGET** is currently set for 10% of school districts (30 districts) purchasing State-grown fruit and vegetables by September 2014. **PERFORMANCE MEASURES** will be based on biennial surveys of State school districts, the number of schools districts reporting that they are purchasing from local farms or buying Local-Farm grown specialty crops through distributors.

#### **OUTCOME #2: Increased numbers of specialty crop growers eligible to sell to schools by obtaining GAP/GHP certification.**

Another **GOAL** of this project is to increase the number of specialty crop growers with the certification required by many school districts. In order to **BENCHMARK** the data, the State currently has 143 specialty crop farms that have passed the GAP audit. As such, the **TARGET** number is fifty new farms with a GAP/GHP certification by September 2014. **PERFORMANCE MEASURES** will include the number of farmers participating in the workshops, number of downloads of GAP/GHP training materials from DA website, and the number of farmers certified by DA's Fruit and Vegetable Inspection Program who report having attended these workshops.

### Work Plan:

The baseline capacity and production information on processing needs of growers will be gathered and the current availability of processing facilities in the State. Training materials will be developed and produced in partnership with the Department and Department of Education (DE) Farm-to-School staff. We will collaborate to:

- a) Develop farmer training programs concerning institutional markets, which will focus on GHP/GAP certification and help them prepare for the audit process.

- b) Develop training programs for foodservice personnel to purchase specialty crops from State farmers, which will include identification of locally grown fruit and vegetables and procedures for purchasing directly from farmers.
- c) Create specialty crop “toolkit” for school food purchasers to include seasonal recipes and menu planning ideas suitable for school use, nutritional and agricultural educational information, and specialty crop purchasing information.
- d) Attend the region Farm-to-School Network meetings to exchange expertise and program ideas with other states to increase specialty crop use in schools.

Farmers will also be educated in order to prepare them for GHP/GAP audits:

- a) Present GHP/GAP on-farm training sessions for farmers.
- b) Produce a video of GAP training requirements and a sample on-farm audit in partnership with State University Small Farms Team and the County Extension.
- c) Develop a GHP/GAP support webpage to make materials available to increase awareness, understanding, and address audit process concerns for small farmers.
- d) Reach out to farmers, especially minority and/or socially disadvantaged farmers and those with small- and medium sized operations, to make sure they are aware of these resources and the GHP/GAP certification option.

#### Timeline Project Activities

<b>What:</b> Hire 1 FTE to coordinate grant activities	<b>Who:</b> Jane Doe (JR)/Robert Smith (RS)	<b>When:</b> Sep 2012 (BEGIN)
<b>What:</b> Planning period for GHP/GAP outreach activities, assess benchmark data on GAP/GHP certification	<b>Who:</b> JD/Coord	<b>When:</b> Oct – Dec 2012
<b>What:</b> Planning period for farmer and foodservice trainings	<b>Who:</b> JD/Coord	<b>When:</b> Jan – May 2013
<b>What:</b> Website set-up for foodservice trainings	<b>Who:</b> JD/Coord/Univ/DA IT	<b>When:</b> May – Aug 2013
<b>What:</b> GAP/GHP on-farm event and video shooting, editing and production (inspectors present for on-farm event and video shoot and provide expertise for production)	<b>Who:</b> JD/SFDM/Coord	<b>When:</b> Jul – Dec 2013
<b>What:</b> Survey school nutrition directors to determine numbers and levels of spending on specialty crops grown in State.	<b>Who:</b> JD/Coord	<b>When:</b> Oct – Dec 2013
<b>What:</b> Farmer Training Events (incl. GAP Training) – 3 events	<b>Who:</b> JD/Coord	<b>When:</b> Jan – Mar 2014
<b>What:</b> Foodservice Training events – 3 events	<b>Who:</b> JD/Coord	<b>When:</b> May – Jun 2014
<b>What:</b> GHP/GAP On-Farm Event	<b>Who:</b> JD/SFDM/Coord	<b>When:</b> Apr – Jun 2014
<b>What:</b> Processing/Distribution Survey to farms and processors (Development based on info to be provided by CHC and DA Farm-to-School staff)	<b>Who:</b> JD/Coord	<b>When:</b> Sep – Nov 2013

**Timeline Project Activities**

<b>What:</b> Processing Study Analysis, Report and plan next steps for Processing and Distribution Project – outreach, farmer-processor-buyer summits, etc.	<b>Who:</b> JD/Coord/SFDM/RS	<b>When:</b> Dec 2013 – Apr 2014
<b>What:</b> Gather and assess data on GHP/GAP certification during grant period	<b>Who:</b> JD/Coord	<b>When:</b> Jun – Jul 2014
<b>What:</b> Final Reporting on Grant Activities	<b>Who:</b> JD/Coord/RS	<b>When:</b> Jul – Sep 2014 (END)
<b>What:</b> Survey School nutrition directors to determine numbers and levels of spending on specialty crops grown in State (Follows grant periods, but allow us to gauge change and interest for next steps)	<b>Who:</b> JD	<b>When:</b> Oct – Dec 2014

**Budget Narrative (Total \$104,000.00)**

<b>Funding Cycle FY12</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Match</b>
<b>Personnel</b>			
Half Time Coordinator	\$17,000.00	\$17,000.00	\$34,000.00
<b>Total Personnel</b>	<b>\$17,000.00</b>	<b>\$17,000.00</b>	<b>\$34,000.00</b>
<b>Benefits</b>			
Half Time Coordinator 25%	\$4,250.00	\$4,250.00	\$8,500.00
<b>Total Benefits</b>	<b>\$4,250.00</b>	<b>\$4,250.00</b>	<b>\$8,500.00</b>
<b>In-State Travel</b>			
Lodging	\$0.00	\$0.00	\$1,144.00
Meals	\$0.00	\$0.00	\$1,132.00
Mileage	\$0.00	\$0.00	\$1,713.25
<b>Total In-State Travel</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$3,989.25</b>
<b>Supplies</b>			
Office Supplies/Materials for Online Toolkit	\$500.00	\$500.00	\$500.00
Education Materials	\$500.00	\$500.00	\$500.00
<b>Total Supplies</b>	<b>\$1,000.00</b>	<b>\$1,000.00</b>	<b>\$1,000.00</b>
<b>Contractual</b>			
Video Shoot/Edit , 5 youth (\$2,000 each)		\$10,000.00	\$0.00
Online Toolkit Development and Adaptation	\$5,000.00	\$5,000.00	\$0.00
Processing Study Analysis		\$3,000.00	\$0.00
<b>Total Contractual</b>	<b>\$5,000.00</b>	<b>\$18,000.00</b>	<b>\$0.00</b>
<b>Other</b>			
SU Small Farms and Small Farms Advisory Board Meetings	\$4,000.00	\$4,000.00	\$4,000.00

<b>Funding Cycle FY12</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Match</b>
Copies of Gap/GHP video onto DVD		\$2,000.00	
GAP/GHP On- Farm Trainings, Admin Costs			\$4,000.00
Processor Survey		\$10,000.00	
Farm Trainings		\$6,000.00	\$6,000.00
Food Service Trainings		\$10,500.00	\$10,500.00
<b>Total Other</b>	<b>\$4,000.00</b>	<b>\$32,500.00</b>	<b>\$24,500.00</b>
<b>TOTAL PROJECT COSTS</b>	<b>\$31,250.00</b>	<b>\$72,750.00</b>	<b>\$71,989.25</b>

**Personnel (\$34,000.00)**

One full time staff person will be hired to coordinate the activities of this grant. The position will be funded 50% by grant funds and 50% by matching funds. They will need to have familiarity with the farm-to-school and/or direct marketing agriculture field, and so have been budgeted at a salary of \$34,000 each year (50% equals \$17,000 per year), to match the agency job level qualified to independently develop and implement surveys, programs, evaluations and economic analysis.

**Benefits (\$8,500.00)**

Benefits for the full time staff person to be hired to coordinate grant activities is estimated at 25 percent, for annual benefits at \$4,250 per year.

**Supplies (\$2,000.00)**

\$500 x 2 years for office supplies & materials to support content for online toolkit; \$500 x 2 years for purchasing education materials.

**Contractual (\$23,000.00)**

Stipends for GAP/GHP Video Shoot/Edit: flat fee stipends for 5 youth at \$2,000 each to be coordinated through County Extension Hmong Youth Film Project. Youth will film and edit video in close collaboration with DA staff and under supervision of SU Hmong Outreach Coordinator.

Online Toolkit Development and Adaptation: this \$10,000 contract will take the online toolkit donated by University State X, and adapt it for DA use and web specifications. Personnel under this contract will be paid at a rate of \$60/hour. Any leftover funds will be used to develop State-specific content for the toolkit.

Processing Study Analysis: this \$3,000 flat rate contract will analyze the production information on processing needs of growers and current availability of processing facilities and compile a report.

**Other (\$36,500.00)**

SU Small Farms Team and Small Farms Advisory Board Meetings - \$4,000 annually for the two years (\$8,000), to be able to meet in person with team and board members from around the state to plan, develop, and implement training and outreach to small farms and minority and socially

disadvantaged farmers. These farms are those most likely to need GAP/GHP certification to sell to schools.

Copies of GAP/GHP video onto DVD - \$2,000 for getting DVDs made and packaged

Processor Survey: \$10,000 for sampling, survey printing and mailing to farmers and processors around the State, using services of National Agricultural Statistics Service, information from the Processors Association and other sources.

Farmer Trainings: \$2,000 x 3 (\$6,000) for space rental, educational materials, trainer stipends and other costs.

Foodservice Trainings: \$3,500 x 3 (\$10,500) for space rental, educational materials, trainer stipends, food for demonstrations and hands-on workshop.

### **Matching Funds:**

The grantee will provide \$71,989.25 in matching funds for this project, which consists of 50% of the Coordinators salary and benefits as well as other expenses.

### **Project Oversight:**

The grant will be managed and supervised by Jane Doe, Program Manager for the DA Farm-to-School Program. She will hire project staff and oversee their work, progress on the project, adherence to timelines, spending and coordination with other agencies, including the State, and other partners. Ms. Doe will consult and partner with others in the Department to strategize and implement grant activities. In addition, Robert Smith, Chief, Marketing and Economic Development, will meet weekly with Ms. Doe to monitor progress, identify issues or concerns and assure that the project is progressing according to the timelines presented. In addition, DA's fiscal office and contract staff will monitor contract timelines to assure compliance with reporting and billing requirements. They will also monitor for compliance with appropriate state and federal rules and procedures.

### **Project Commitment:**

This project is building on work done in collaboration with a number of partners over the past couple of years. Many of those partners will work with DA on the proposed projects, as detailed below. The SU County Extension service will loan video and editing equipment; SU Small Farms Team will conduct outreach about GAP's; the Institute for Sustainable Agriculture and University Extension will structure for foodservice toolkit website and page structure and coding.

## Measuring Irrigation Water Quality on Fruit and Vegetable Farms

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### **Applicant:**

ABC Private University

### **Abstract:**

Partner with State B, C, D, E, F, and G to objectively measure the quality of irrigation water used on fruit and vegetable farms in several states to help shape future irrigation water standards, improve on-farm risk assessment, provide strategies for implementing a water testing program, aid in interpreting water testing results, and provide assistance for understanding when mitigation strategies should be adopted.

### **Project Partner Organizations:**

State B, C, D, E, F and G will partner with ABC Private University on this project.

### **Project Purpose:**

This project is focused on the collection of scientific data on irrigation water quality in the seven states to contribute to the National Irrigation Database organized by the National GAPs Program at Cornell University for fresh fruit and vegetable production in the National Food Safety Program. Consequently, this activity may help shape future national irrigation water standards. Moreover, educational workshops on irrigation water quality management will be provided to Extension professionals and producers. This effort will improve on-farm risk assessment, provide strategies for implementing a water testing program, aid in interpreting water testing results and provide assistance for understanding when mitigation strategies should be adopted.

Fruit and vegetable crops tend to be irrigated with surface water sources, such as ponds and streams. While there is concern with all sources of water for pre-harvest use, surface water has a higher probability of being exposed to more fecal contamination than ground water. This is expected to pose greater human health risk than irrigation water from deep aquifers with properly constructed and protected wells. In most cases, the sanitary quality of surface water used for irrigation is not known because it is not regularly tested.

This project has not been submitted to or funded by another Federal or State grant program.

### **Potential Impact:**

Contamination of fresh fruits and vegetables with pathogens can occur anywhere in the supply chain, and once it occurs, it is difficult, if not impossible, to remove. The FDA Produce Safety Action Plan states that the most likely points of contamination of high risk commodities by key pathogens occur during pre-harvest production. Among these points, one of the most likely potential mechanisms of *E. coli* O157:H7 and *Salmonella* contamination is water (irrigation or flooding/runoff from adjacent land).

The fruit and vegetable industry accounts for nearly \$75,000,000 in annual sales and is comprised of over 5,000 farms over the seven involved states. This project will impact the local and regional fruit and vegetable industry by providing an objective assessment of the quality of water currently used for irrigation, evaluating the ability of currently-used criteria to discern contamination by key pathogens and providing information to Extension professionals and

producers to improve on-farm irrigation water management. Furthermore, by maintaining buyer and consumer confidence in and demand for fruit and vegetable production in the State will potentially enhance farm viability and profits.

### Expected Measurable Outcomes:

The **GOAL** of this project is to participate in the development of a National Irrigation Database. The database will provide new scientific data to support comprehensive efforts by the produce industry and public health regulators to create meaningful and realistic water quality standards that minimizes microbial food safety hazards to fresh and fresh-cut vegetables posed by surface irrigation (**TARGET**). There has not previously been an effort to measure current irrigation water quality (**BENCHMARK**). Irrigation water samples will be taken four times during the production season. Results will be compiled and analyzed by crop, region, source and time of sampling. These results will be added to the National Irrigation Database (**PERFORMANCE MEASURE**).

### Work Plan:

Baseline water quality data will be collected four times during the production season on water samples on 10 farms in each of 3 geographically diverse regions of the State, with varied irrigation sources (rivers, ponds, lakes, streams, wells, springs, etc.). A total of thirty farms will be chosen for each year of the project, providing data from 60 farms over the 2 year life of the project. This data will be added to the National Irrigation Database developed by the National GAPs Program at Cornell University.

Quality analyses will include quantified generic E. coli, specific conductance, turbidity and pH and will be performed by certified private laboratories capable of these analyses. Since one of the objectives of this project is to educate growers and farm managers about the importance of on-farm irrigation water management practices for microbiological criteria, this is a perfect opportunity to conduct one-on-one training for water sampling with individual growers. Repeated site visits will provide training reinforcement and quality control. A minimal component site survey and adjacent land-use analysis for potential water quality impacts will be conducted at each sampling site. The site evaluation template will be adopted from the USDA GAP audit checklist.

### September 2012 to September 2014

#### 2012

- (September – December) ➤ Develop workshop materials and factsheets for water sampling, testing and mitigation strategies to reduce microbial load

#### 2013

- (April – September) ➤ Collect irrigation water samples from 10 farms in each of 3 geographic regions, four times over the production season (10 farms x 3 regions x 4 sampling times= 120 samples)

- (August – November) ➤ Develop workshop materials and factsheets for water sampling, testing and mitigation strategies to reduce microbial load

**2014**

- (April – September) ➤ Collect irrigation water samples from 10 farms in each of 3 geographic regions, four times over the production season (10 farms x 3 regions x 4 sampling times= 120 samples)
- (August – November) ➤ Provide workshops on irrigation water quality and management for Extension professionals and growers in 3 regions

**Budget Narrative (\$50,032.00):**

<b>Budget Item</b>	<b>Year 1</b>	<b>Year 2</b>	<b>TOTAL</b>
<b>Personnel</b>			
Student Assistant (See Narrative)	\$4,680.00	\$4,800.00	
<b>Total Personnel</b>			<b>\$9,480.00</b>
<b>Fringe Benefits</b>			
Benefits (40%)	\$1,872.00	\$1,920.00	
<b>Total Fringe Benefits</b>			<b>\$3,792.00</b>
<b>Supplies</b>			
Supplies	\$1,750.00	\$0.00	
<b>Total Supplies</b>			<b>\$1,750.00</b>
<b>Travel</b>			
Travel	\$3,750.00	\$5,250.00	
<b>Total Travel</b>			<b>\$9,000.00</b>
<b>Contractual</b>			
XYZ Laboratories (water testing)	\$11,980.00	\$10,980.00	
<b>Total Contractual</b>			<b>\$22,960.00</b>
<b>Other Costs</b>			
Shipping Costs	\$550.00	\$0.00	
Publication Costs	\$0.00	\$1,000.00	
Workshops, Materials, and Media	\$0.00	\$1,500.00	
<b>Total Other Costs</b>			<b>\$3,050.00</b>
<b>Total Funds Requested</b>	<b>\$24,582.00</b>	<b>\$25,450.00</b>	<b>\$50,032.00</b>

**Personnel (\$9,480.00)**

We plan to hire one student to assist with this project through data entry and training preparation. In Year 1, this individual will work a total of approximately 4 hours per day at \$13.00 per hour for 2 days per week for 45 weeks (**\$4,680.00**). In 2014, the student assistant will maintain the

same wages; however, he or she will also receive a stipend of \$120 to attend and present at one of the grower workshops for a total of **\$4,800.00**.

### **Fringe Benefits (\$3,792.00)**

The fringe benefit rate for the student assistant is 40 percent; therefore, in Year 1, the project will pay **\$1,872.00** for the student assistant and **\$1,920.00** for 2014.

### **Supplies (\$1,750.00)**

Dr. Joe Smith and his research assistant will need research supplies such as sample tubes, boxes and trays for transportation, and water samplers. These items will total **\$1,750.00**.

### **Travel (\$9,000.00)**

ABC Private University's established automobile mileage rate is \$0.40/mile. To complete the objectives of this project, the project staff will need to travel an average of 170 miles in the eastern region of the State, 360 miles in the central region of the State, and 620 miles in the western region of the State. This is a total of 1,150 miles for one trip or \$460 (1,150 miles x \$0.40). There will be a minimum of 4 trips per year for a total of **\$1,840** along with an additional average 200 miles per region to collect samples from each farm for a total of **\$960** (4 trips x 3 regions x 200 miles x \$0.40). There will be 4 trips to the central and western regions that requires 2 nights at hotels. These charges will total **\$560** (\$70/night x 8 nights). ABC Private University's Per Diem rate for meals (\$39/day), while traveling for 10 days, will total to \$390 (\$39/day x 10 days). Each of the items included in the Travel, Training, and Workshop section totals to the amount of **(\$3,750.00)** for the Year 1 budget.

The sampling travel costs will be the same for the Year 2 budget; however, additional costs for travel to two workshops in each region (one for Extension agents and one for growers). The eastern region will not require travel costs; therefore, the total amount needed for travel to 2 regions for 2 workshops is \$375 per event for a total of **\$1,500.00**. Consequently, the 2014 budget is **\$5,250.00** (\$3,750 + \$1,500).

### **Contractual (\$22,960.00)**

We will contract with XYZ Laboratories in order to perform the water analysis of all the samples gathered by the project investigators. This quality analysis will be performed for a flat rate of **\$10,980** per year of the project for a total of **\$21,960.00** (\$10,980 x 2).

Each lab that enters data will need a secure password and some training for data input. This will have an initial cost (approximately \$1,000.00). Currently quality control procedures are performed for all data entered into the database with the lab data form. This too requires time, but is not necessary once the lab understands the data entry portal and how it works.

### **Other Costs (\$3,050.00)**

There are certain areas in the State that are considered to be inadequate for transferring water samples by vehicle. The cost associated with shipping these samples is **\$550.00**.

In year 2, workshops will be offered for Extension professionals through train-the-trainer sessions and growers in each of the 3 regions of the state, covering proper irrigation water sampling, choosing the proper sanitary water tests, interpreting the test results and selecting mitigation strategies (**\$1,500.00**). Training materials will be developed both for hard-copy and

web dissemination. Presentations will also be developed for the workshops and available to the Extension professionals for use in their home counties (**\$1,000.00**).

**Project Oversight:**

Dr. Doug Smith will oversee the advancement of this project, which will include data collection, analysis, and outreach activities. The labs doing the analysis will have access to the database so the data can go directly into the database. Dr. Doug Smith also will work directly with growers and Extension professionals across the state to sample water from fruit and vegetable farms using various irrigation sources. Outreach programs will be offered to growers for implementing water testing programs, interpreting water test results and understanding when mitigation strategies should be adopted.

**Project Commitment:**

Project partners are committed to the implementation of all aspects of this water quality project. In fact, there has been a Memorandum of Understanding signed between all States involved in this project to ensure the quality of the cooperation between these entities. The ABC Private University will lead implementation of the overall multi-state endeavor. Specifically, it will be responsible for the research, information, and outreach.

**Multi-State Project:**

**Total Grant Request:** \$200,032.00

<b>The State:</b>	\$50,032				
<b>State B:</b>	\$25,000	<b>State C:</b>	\$25,000	<b>State D:</b>	\$25,000
<b>State E:</b>	\$25,000	<b>State F:</b>	\$25,000	<b>State G:</b>	\$25,000

The project proposed here is intended to help fill the nationwide irrigation water quality knowledge gap by compiling and analyzing water samples for generic Escherichia coli (E. coli) densities, pH, specific density and turbidity that will be incorporated into the National Irrigation Database. Collaborators in six other states are interested in participating in this nationwide effort. The states involved agreed to pursue funds to complete water quality work and enter data for the National Food Safety Program.

Specifically, the State has partnered with ABC Private University to act as the coordinating organization of this network of seven different states. ABC Private University will work with a board of water quality specialists that represent each state. The board has members and associates serving on committees including research, analysis, and outreach activities for the National Irrigation Database. This project has the full support of each participating States’ Departments of Agriculture. The State will take the coordinating role in monitoring the progress of this project.