

Proposal for a Continuing Education Program in Sustainable Agriculture for Cooperative Extension County Agents and other Agricultural and Community Development Professionals

**Submitted to SARE Operations Committee
January 6, 2004**

Proposal Summary and Major Outcomes

Request funding of \$97,900 from national SARE to develop a curriculum framework for a continuing education program in sustainable agriculture; and develop, deliver, and evaluate a Web-based pilot course on one unit of the curriculum, thereby enhancing regional PDP efforts nationwide.

Outcome 1: New agents and other key agricultural professionals are more able and better equipped to advise their clientele and develop research and education programs in sustainable agriculture.

Outcome 2: SARE Regions have a more clearly defined framework and guide for building in-depth professional training without having to spend time on basics.

Background / Audience

Chapter 3 of the 1990 Farm Bill outlines the need for a national training program in sustainable agriculture for Cooperative Extension personnel and other agricultural professionals. Particular focus is placed on the need for bringing new agents within the Extension service to a basic understanding of sustainable agriculture. The overall purpose of Chapter 3, or PDP, is to increase the capacity of Extension and other ag professionals to apply sustainability principles and practices in working with their clientele (including but not limited to farmers, consumers, youth, businesses, government, or communities.)

The primary audience for SARE PDP is Cooperative Extension county agents (in some states known as county faculty, or advisors). The size of this audience is estimated at around 5,000. In addition to Extension educators, the SARE PDP is also targeted at employees in other federal agencies including NRCS, and FSA. Other key agricultural professionals, or local service providers, could include: private pest control advisors, crop consultants, and NGO community and farmer group representatives.

The professional development program is currently implemented through four regional coordinators based in the SARE regions and their respective networks of state-level coordinators and programs. The regional and state coordinators, along with a diverse portfolio of competitive PDP projects, have generated an impressive level of educational programming for ag professionals over the past 7 years. One key component that has been missing from PDP over this time has been a clear picture of what specific knowledge and skills extension personnel and other ag professionals should have in order to adequately address sustainability in agriculture. PDP representatives have also expressed an immediate need for a basic course in sustainable agriculture to help meet the requirements of the legislation, particularly as it relates to new hires within Extension.

Project Activities/Products

Curriculum framework. Some initial work has been undertaken by the national SARE office and the SARE regions to help define the sustainable agriculture educational needs of extension educators. This project will advance that work to the next level by developing a curriculum framework that defines the basic competencies required of Extension personnel and other ag professionals for advising farmers and other clientele, responding to questions and requests for assistance, and developing extension and education programs in line with sustainability principles and goals. Such a framework would lay out the breadth of subject matter areas and topics that encompass agricultural sustainability, and state the basic-level knowledge, skills, and/or behaviors we intend the target audience to achieve in each major content area.

A sample curriculum framework is included as Attachment 1 at the end of this proposal. Although this sample framework is in a different topic area (Core Competencies for County Extension Directors) it shows the basic elements of the framework that will also be addressed and developed in our project:

The Core Competency or Major Topic Area. The table included here is for one of seven Core Competencies outlined for County Extension Directors in North Carolina. At our initial planning meeting in Nashville, five major topic areas were identified for a basic course in sustainable agriculture: 1) Basic Principles, 2) Participatory, Community-Based Program Planning, 3) Strategic (Whole Farm) Planning, 4) Agroecology, and 5) Sustainable Ag Resources/Information.

Sub-Competencies. The sub-competencies (or topics) listed down the left-hand side of this table could be thought of as individual course modules or sub-units. In relation to our project on sustainable agriculture, if Agroecology is the major topic or core competency, then one sub-topic or sub-competency might be Soil Health.

Intended Learning Outcomes Organized by Proficiency Levels. These are clear, succinct statements of what skills, knowledge and/or behaviors it is expected that the individual should be able to demonstrate. This project will focus on developing the Level I learning outcomes for extension professionals in sustainable agriculture.

This set of intended learning outcomes serves two purposes. First, it is the compass that will help keep us focused in the right direction when developing course content. What do we want the target audience to gain after completing the course? Second, the framework and learning outcomes establish the targets for evaluating student success and provide the guidelines for developing tests, exams, or surveys that help measure if those outcomes have been achieved.

The framework will also provide a structure for the SARE regions and state PDP programs to add the necessary depth component (Level II and III proficiencies in the attached sample framework) to help our target audience put basic principles into practice. These higher level competencies and education programs will be developed separately by each region and focus on how to put the basic skills and knowledge into practice in the field and in the communities in which ag professionals work. The format for regional courses and programs will likely be more hands-on, and on-site, although additional online courses may be developed to complement any basic courses provided at the national level.

Pilot Web-based course. The curriculum framework is intended to be a guide and springboard for the development of appropriate courses, workshops, and trainings suited for ag professionals across the nation. We see significant advantages in covering the basic (Level I) competencies and skills in a national on-line course in sustainable agriculture. This will help states and regions better meet the requirements of the legislation, which states that new hires must have training in sustainable agriculture within their first two years. The basic course, in the context of the curriculum framework, would cover the fundamentals and provide a foundation that the regions and states could build on through more in-depth and hands-on workshops and courses held on-site in more traditional settings and formats.

This project proposal includes the development of a pilot Web-based course on one major topic area selected from the national curriculum framework (most likely the “Basic Principles” unit, but the curriculum design team will decide this together in consultation with the regional PDP coordinators.)

Why an online course? There are several reasons. First and foremost is that the Web allows us to more easily and efficiently reach our large and geographically distant audience (approximately 4,000 county extension agents in 50 states and 6 territories and protectorates). Second, advances in computer technology now make it possible to create and deliver a very high quality educational product to our target audience: one that is graphically rich, engaging, and that offers the opportunity for thought, reflection, action and further study if desired. In order to streamline costs and course access, this initial basic-level course will be delivered asynchronously, i.e. it will be self-guided and self-paced, and with no regular instructor contact. Lastly, delivering the course online will allow us to easily track student use and progress through an interface with a secure Web server database. This is a particularly important aspect of the project considering the large numbers of people we anticipate taking the course and the need for simple and effective measures of evaluating how well we are doing in reaching our objectives. (Computer network security will be of the utmost importance: Any student data that is stored will be protected according to stringent protocols.)

We plan to integrate the pilot course with an on-line system established by the Southern Region Program Leadership Network called the Cooperative Extension Curriculum Project (CECP). CECP will provide the technical infrastructure we need to create a quality educational experience for the end user and the means to manage and monitor course content and student usage efficiently. The CECP offers a content management system for developing, cataloging and sharing multimedia courses, modules and learning assets. This system is capable of tracking learner achievement and providing reports as needed. Additionally, the system is designed for the maximum sharing of learning resources across states and is aligned to become part of the larger e-Extension effort nationwide. CECP incorporates a set of standards that ensure the development, selection and sharing of consistent, high quality learning resources. The proposed curriculum project will follow CECP guidelines and standards. Additionally, a member of the CECP Steering committee (Julie Sexton, Mississippi State University) will serve on this project’s Curriculum Design Team, thereby ensuring continuity between the two efforts. Ms. Sexton is also involved in a Southern Region SARE PDP project to develop educational programming in sustainable agriculture and will provide valuable input into how our national project and regional efforts can best be integrated.

In developing this initial course we will keep our focus on the students— county extension educators. A brief profile of this audience includes the following characteristics: minimum Bachelors or Masters level education, some field experience, multiple responsibilities on the job, particular clientele and work assignment varies greatly (e.g., ag production, community development, marketing, natural resources, etc...), limited time to spend on the course, varying levels of motivation and incentive to participate in the course. To effectively reach this audience, the course content must be of high quality, accurate and relevant to their needs. Additionally, and in light of the profile above, the course must also be well-structured, concise but challenging, visually attractive, and easily accessed anytime of day or night. At this time, we plan to present the course free of charge. We will also work closely with the regions to develop a strategy to promote and advertise the course with the target audience, and to ensure that students who take the course receive appropriate credit, such as a certificate of completion, acknowledged by extension administrators and that could be incorporated into merit and promotion packages as a professional development activity.

Project Evaluation

The Curriculum Design Team (see below) will help develop an evaluation plan for the curriculum framework and the pilot course, addressing both the product development phase as well as the final delivery and usage of each component. These activities are summarized in the following table.

	Product Development Phase <i>Goal: assure relevancy and quality</i>	Product Delivery and Use <i>Goal: measure effectiveness and progress toward project outcomes</i>
Curriculum Framework	<ul style="list-style-type: none"> • make available on Web for review • identify additional technical and education/extension reviewers • request feedback specifically from regions, state PDP coordinators, ANR leaders, NRCS and others 	<ul style="list-style-type: none"> • assess how framework is being used by regions and others 6 months, 12 months after completion
Online Course	<ul style="list-style-type: none"> • identify additional technical and education/extension experts to help develop and review content • form extension educator test group to review beta version of course • develop good pre- and post-test questions for student assessment 	<ul style="list-style-type: none"> • track numbers of students taking course • track and analyze progress on pre- and post- tests • follow-up survey to assess how course participation may have influenced students' work

Curriculum Design Team

Both components of this project will be developed through a national curriculum and course design team composed of individuals who are knowledgeable about sustainable agriculture and the SARE Professional Development Program and who have experience in professional education and the development/delivery of online courses. Subject matter experts will also be

enlisted as consultants to help define the basic competencies (skills, knowledge, behaviors) required for the different components of the curriculum.

The following individuals will participate on the curriculum design team:

Project Leader: David Chaney, state PDP Coordinator, University of California

Deborah Young, ANR Leader, University of Arizona

Andy McGuire, state PDP Co-Coordinator, Washington State University Extension

Deborah Cavanaugh-Grant, state PDP Coordinator, University of Illinois

Julie Sexton, Mississippi State University Extension

Vern Grubinger, state PDP Coordinator, University of Vermont

Kim Kroll, SARE Associate Director

Their role in the project is to:

- Work with the project coordinator (Chaney) to complete the curriculum framework, identifying all major topic areas (core competencies) and sub-topics, and assisting in writing basic level learning outcomes for those areas in which they have expertise.
- Assist Chaney in identifying subject matter experts to help complete the framework in particular subject areas, and review the framework for technical accuracy and relevancy.
- Determine sequencing and prioritization of curriculum units for development into a basic course in sustainable agriculture, including identification of the initial module to develop as pilot Web-based course.
- Develop the evaluation and review procedures for the curriculum framework and pilot course.
- Help develop a plan for advertising and promoting the course with our target audience, and for ensuring that students who complete the course receive appropriate credit related to job advancement.

Work Plan

Date	ACTIVITIES	
	Curriculum Framework	Pilot Web-Based Course
2003		
Nov – Dec	Form Curriculum Design Team	
2004		
Jan – Mar		
	Major Headings / Units established	Identify IT and graphic design personnel who will work on Web based Course
	Subject matter experts identified to assist in completion of framework details	
	Establish review process for framework	
	Determine sequencing and prioritization of units for development into course components	
Apr – June		
	Design team work with subject matter experts to complete framework units and modules (incl. LEVEL 1 competencies / skills / learning objectives)	Determine scope and content of first course. Identify course development team (anticipate overlap with curriculum design team).
		Establish course review and testing process. Determine course delivery method and provider, and associated parameters for developing content.
		Begin writing and developing on-line content and activities for pilot course
July – Oct		
	9/1: First draft of curriculum framework completed and ready for review by regional coordinators and others	
Nov – Dec		
	Revise framework based on feedback from reviewers	11/1: First draft of online course ready for testing / review
2005		
Jan – Mar		
	1/15: 2 nd draft completed ready for final review.	Continue testing and review of pilot course. Update course based on feedback and evaluation.
April	Framework Completed.	Final changes revisions on pilot course being implemented. Develop promotion, advertising, marketing plan.
	Final report and recommendations to ops committee for completion of other basic course components.	
June		Pilot course completed and ready for posting.

Budget Overall

Personnel

Project coordinator (40% time-15 months @ \$50/hr)	\$ 52,800
Curriculum design team (5 people, 5% time @ avg. \$35/hr)	23,100
Subject matter experts (10 people, \$1,000 stipend each)	10,000
Pilot Course Development (Tech. Infrastructure / Design)	
Database – Web programmer (40 hrs. @ \$60/hr)	2,400
Graphic Design (20 hrs. @ \$60/hr)	1,200
Web writer (80 hrs. @ \$20/hr)	1,600

Travel

<u>Curriculum design team</u> One 2-day meeting over course of project (6 OR 7?? people) airfare / transportation / hotel / meals	5,000
Additional travel for project coordinator	1,500

Materials / Supplies / Communications

telephone, project coordinator (\$20 / month)	300
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TOTAL **\$ 97,900**

possible additional costs include:

\$ 800	software
\$1,300	CD duplication

Budget: Alternate Format Broken Down by Project Component

Curriculum Framework (January – June 2004)

Personnel

Project Coordinator (40% time- 6 months @ \$50/hr) \$ 24,000

Curriculum design team
(5 people, 5% time- 6 months @ avg. \$35/hr) \$ 8,400

Subject matter experts
(10 people, \$1,000 stipend each) \$ 10,000

Sub-Total **\$ 42,400**

Pilot Course Development (July 04 – March 05)

Personnel

Project coordinator (40% time-9 months @ \$50/hr) \$ 28,800

Curriculum design team
(5 people, 5% time- 9 months @ avg. \$35/hr) \$ 14,700

Pilot Course Development (Tech. Infrastructure / Design)

Database – Web programmer (40 hrs. @ \$60/hr) 2,400

Graphic Design (20 hrs. @ \$60/hr) 1,200

Web writer (80 hrs. @ \$20/hr) 1,600

Travel

Curriculum design team

One 2-day meeting over course of project (6 OR 7?? people)
airfare / transportation / hotel / meals 5,000

Additional travel for project coordinator 1,500

Materials / Supplies / Communications

telephone, project coordinator (\$20 / month) 300

Sub-Total **\$ 55,500**

GRAND TOTAL **\$ 97,900**

County Extension Director Core Competency Technical/Subject Matter Expertise The mastery of a scientific discipline, a research body of knowledge, or a technical proficiency that enhances individual and organizational effectiveness.			
Sub-Competency	Proficiencies		
	Level I	Level II	Level III
Team Building & Group Work	<p>Knows the principles of Team Building.</p> <p>Develops an understanding and acceptance of individual roles and responsibilities within the team.</p>	<p>Engages unit staff & volunteers effectively in team building.</p> <p>Builds an effective environment for team development.</p> <p>Knows principles and skills of effective facilitation.</p> <p>Effectively facilitates group meetings.</p>	<p>Engages organization staff, volunteers, and leaders effectively in team building.</p> <p>Develops understanding of team strengths and weaknesses.</p> <p>Can develop and facilitate the strategic planning effort of a team.</p>
Training, Coaching & Delegating	<p>Seeks to develop team members.</p> <p>Understands the principles of empowerment.</p> <p>Mentors employees on their performance development plans.</p> <p>Orients new employees using the prescribed process into their work environment and programs successfully.</p> <p>Recognizes needs and methods of achievement of others.</p>	<p>Demonstrates good practices in delegating and sharing assignments that help others to grow & develop.</p> <p>Develops buy-in and commitment to delegated assignments.</p> <p>Recognizes the major achievements of others.</p>	<p>Mentors other supervisors on methods for developing others and empowerment.</p> <p>Consistently recognizes and celebrates achievements of others.</p>
Staffing, Recruitment & Hiring	<p>Understands staffing & program needs of customer-base.</p> <p>Has knowledge of and demonstrates effective behavioral interviewing skills.</p> <p>Knows, models, and practices legally appropriate methods in recruitment and hiring.</p>	<p>Executes a staffing plan successfully.</p> <p>Knows and uses appropriate methods & markets in the recruitment of new employees.</p> <p>Understand implications & manages the impact of county-state matching formula.</p>	<p>Anticipates needed staffing changes and incorporates them into existing staffing plans.</p>

Sample framework provided by Mitchell Owen, North Carolina State University.
<http://www.ces.ncsu.edu/pods/ced/index.shtml>