

SARE National Core Curriculum Planning Meeting
September 23-24, 2003
Nashville, TN

Meeting Organizers: Kim Kroll (SARE), Roger Crickenberger (NCSU)
Facilitator: Mitchell Owen, NCSU Notetaker: Roseanne Minarovic
Participants: Bill Wilke, Heidi Carter, Deborah Cavanaugh-Grant, Paula Ford, Julie Sexton, Nancy Creamer, Debbie Roos, Dean Fish, Dave Smith, Mickie Swisher, Jim Freeburn, Mena Hauta, Jerry De Witt, Jim Horne, Geoff Zehnder, David Chaney

Main Outcomes

- Framework was developed for curriculum/content areas
- Numerous ideas generated on how to provide incentives for using the curriculum and how to market
- Design team composition determined
- Workplan objectives for proposal to operations committee developed

Fundamental concepts

Teachable concepts that will change knowledge, skills, and observable behaviors in the learner, must be national in scope. Regional training will provide more in-depth training.

Develop national guidelines for training. Each state will identify with the national topics and present the information according to their situation.

Provide states/regions incentives to develop in-depth training related to national topics.

(When we refer to competency area—we mean topic.)

(When we use the term proficiency—we refer to what is measurable.)

Taxonomy—different levels to build on-line learning, must be small chunks of information, identify the broad topic areas, then break down the main topics to some sub-concepts, detail will be developed by design team.

Consider what are the measurable behaviors we want to see in the agent that is trained.

Because the curriculum will be in small chunks, it will be easier to change, to add and delete sections that become obsolete or change.

Also, because the information will be in chunks, the states can pick and choose the chunks of information they need. Specific audiences can piece chunks together depending on the educational need.

The curriculum must be dynamic, have built-in expiration date, we must update and revise as needed.

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BREAKOUT SESSION—the group divided in to 3 sub-groups and each group was asked to identify 6 priority training areas. The groups were very close in their analysis and discussion of priorities. Major training areas were identified as:

Group 1

1. Principles of sustainable agriculture—what it is and what it isn't
 - environmental implications
 - economic/marketing
 - land tenure
 - Elements—water quality, soil conservation, agroforestry, nutrient management, crop diversification
 - Community food systems
 - Social aspects
 - Farmland preservation
 - Preservation of rural communities
2. Sustainable agriculture resources—where to go for information
3. Whole farm planning, systems thinking, integrative problem-solving
4. Participatory programming and research—on-farm, networking, end-user
5. Marketing, sustainable business planning, entrepreneurship
6. Knowledge of agricultural systems—How is it different? i.e. BMPs, IPM, organic

Group 2

1. Principles/basic fundamentals
 - Profitability
 - Environmental responsibility
 - Community relationship/accountability
 - Facilitation skills
 - Grantsmanship
 - On-farm research
 - 9 elements of SARE
 - Systems approach
 - Organics
 - Crop production
2. Soils management
3. Marketing, value-added
4. Pest management
5. Whole farm planning, business management, risk management, record keeping
6. Getting started, beginning agents/farmers

Group 3

1. Evaluation of outcomes/planning for outcomes: How do we evaluate outcomes—effectiveness of educational program, sustainability of systems.
2. Principles of sustainability, concepts and balance, systems (includes marketing)
3. Resource inventory/monitoring with soil as foundation
4. Communication/interpersonal skills—develop relationships, conflict resolution, consumer connection, farmer-to-farmer

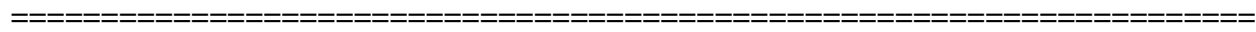
5. Effective teaching methodology/information sources—use of non-traditional information sources (farmers, field staff, industry, NRCS, etc...). Use of on-farm research as teaching method
6. Knowledge generation and dissemination and appropriate adoption. Decision-makers, critical thinking skills

After further discussion these were distilled into the following five major topics for a national curriculum.

5 Major Topics (Core Competencies) for National Core Curriculum

1. Basic principles
 - Information about SARE
 - Systems thinking
2. Participatory, Community-based program planning
3. Strategic Farm Planning, Marketing
4. Agroecology
 - Soil management
 - Pest management
5. Resources and skills for agriculture professionals (some states would be turned-off if we use the term ‘agriculture professionals’ since other groups would be interested in using the information)
 - Information sources, who to contact
 - Funding
 - How to conduct outcome-based training and evaluation.

(Titles of themes should be inclusive and national in scope.)



The facilitator then asked the group to identify *specific training modules/sub-topics* for each of these main topics. Each person was asked to write a training topic on a yellow sticky and post it on the wall under a subtitle. After grouping similar items, each person had 15 votes to prioritize the most important subject areas. Votes could be distributed across the major topic areas as they saw fit (they didn’t need to be evenly distributed across the topics).

Specific training modules / sub-topics under each major topic:

Basic Principles

SARE stuff (11 votes)

- Enabling legislation
- Knowledge of sustainable agriculture resources

- What is SARE? How can it help me?

Background (9 votes)

- Why did sustainable agriculture become an issue?
- State of: water quality, soil quality, community viability.
- Why do we need new research?
- Why did people question commodity agriculture?
- How does commodity agriculture fit or not fit sustainable agriculture?
- How is sustainable agriculture different from other production systems? It's not organic, not IPM.
- Sustaining the agriculture industry versus sustaining a farm.
- Changing structures of agriculture, how will we sustain agriculture?

Sustainable agriculture examples/approaches (8 votes)

- Case studies
- Success stories

Definitional (3 votes)

- 3 legs of sustainability—environmental, economic, social
- systems thinking
- What is sustainability?
- Interconnections between environmental, economic, social.
- 9 elements of SARE
- organic as subset of sustainable agriculture
- sustainability is a process
- long-term vision
- how to evaluate the sustainability of a production system
- preservation of rural communities
- agriculture as a mechanism to enhance the ecosystem services: biodiversity, carbon sequestration, enhancing water quality, providing habitat, etc..
- Farmland preservation
- Diversification of crops and landscapes
- Different from NRCS best management practices
- How is sustainable agriculture different from other agriculture?
- Understanding that all knowledge and all success is not necessarily based on 'science'

Strategic Farm Planning

Land Tenure(1 vote)

- Living in urban fringe/rural area
- Strategic changes in leases of farm land
- Strategic changes in land tenure
- Conservation easements
- Land tenure/transfer

Holistic Management (4 votes)

- Integrating family, business and personal goals
- Inter-generational planning
- Resource monitoring
- Holistic management principles
- Farm plan development

Business planning (11 votes)

- Sustainable business planning
- Business-what to do with acreage
- Profitability
- Evaluation

Marketing (13 votes)

- Direct marketing strategies and opportunities
- Alternative enterprises
- Alternative marketing ventures
- Community supported agriculture
- Farmers markets
- Niche markets commodities
- Strategic-where to get money for value-added enterprises and help clients with first steps of value-added agriculture

Small farm (9 votes)

- Small farm issues
- New entry into farming

Regulation record keeping (1 vote)

- Rules of regulations, how to use them to support sustainable agriculture
- Certified organic farm plan and record keeping

Resources and Skills for Agricultural professionals

Accessing Appropriate Resources (12 votes)

- Sustainable agriculture website, publications, experts
- Skills—state of sustainable agriculture resources
- Skills—already developed resources
- Differences between urban, rural, suburb
- Non-traditional information sources
- SAN
- Dealing in ambiguous science

Facilitation skills (8)

- Facilitating farmer cooperatives (and farmers cooperating)

- Facilitating farmer networks
- Agents as facilitators (versus experts)
- Skills—hands-on activities

Evaluation (6 votes)

- Outcome-based evaluation

Interpersonal skills development (4 votes)

- Dealing with conflict
- Counseling skills
- Listening skills
- Gaining trust leadership in sustainable agriculture ‘walking through the fire’

Personal Development (3 votes)

- Acquire needed skills
- Knowledge of how and why people change
- Critical thinking
- Introduction to on-farm research

Grant writing (3 votes)

- Grantsmanship

Agroecology

Soil (13 votes)

- Conservation tillage systems
- Soil ecology
- Sustainable soil management
- Soil quality and health
- Cover crops
- Rotations

Organic production (12 votes)

- Certified organic production practices
- Principles of organic agriculture
- Plant/animal systems

Crop systems (9 votes)

- GMOs
- Extending growing season (GH and HT's)
- Integrating crop systems (i.e. agronomic and veggie systems)
- Monocropping systems are difficult to maintain
- Integrating livestock and crops
- Crop selection and production

Managing natural resources on farm (8 votes)

- How systems relate, cause and effect
- holistic integrated production
- Natural resource management on-farm

Pest Management (8 votes)

- Weeds, insects, diseases
- Sustainable disease management
- Beneficial; insect habitat
- Biologically intensive IPM
- IPM

Grazing systems (6 votes)

- Managed intensive grazing
- Controlled rotational grazing

Livestock / Range Systems (5 votes)

Water Issues (3 issues)

- Water quality management
- Water conservation

Wildlife (2 votes)

- Wildlife habitat
- Managing non-productive land
- Wildlife friendly farming

Agroforestry (0 votes)

Participatory Community based

On-farm research (12 votes)

- Designing and analyzing on-farm research
- On-farm (ranch) research principles and practices

Farmer to farmer networking (8 votes)

- Facilitation, building learning networks
- Information sharing
- Value of experiential knowledge

Agriculture and food systems (7 votes)

- Link land grants with local and community organizations
- Importance of agriculture to non-farm public
- Work with community based food systems
- Connect with consumers

Food Safety (1 vote)

- Food security
- Food and farmer safety
- Food quality
- Direct marketing food safety

People skills (0 votes)

- Building trust
- Reaching a diverse audience

Program skills (0 votes)

- Needs assessments
- Skills in experiential learning
- Participatory approach to designing and implementing programs
- Evaluation of needs
- Critical thinking/evaluation of information sources

Top 3 modules/sub-topics:

1. Basic Principles, definition (13 votes)
2. Marketing (13 votes)
3. Soils (13 votes)

Other subject areas:

- Assessing appropriate resources (12 votes)
- On-farm research (12 votes)
- Business planning (11 votes)
- Organic production (12 votes)
- SARE “stuff” Information (11 votes)
- Cropping systems (9 votes)
- Natural resources (8 votes)
- Pest management (8 votes)

The subject areas and topics must be revisited. Go over data to ensure that all important topics are included and re-categorize, if necessary.

Concerns:

- elements missing—production, agroecology topics
- make sure design teams focus on examples and case studies
- when possible, integrate crop and livestock system examples

Recommendations for Design Team:

- Training should be inclusive of all audiences
- Curriculum should be national in scope
- Use case studies
- Evaluate behavioral outcomes

- Teaching skills and learning approaches should be incorporated into the modules
- Survey PDP State Coordinators to provide input on what training information is available.

Web-Based Training Discussion

Characteristics of a web-based environment that agents are receptive to:

Refer to handout of program in California (Dave Chaney)

Attempt to make course graphically intensive

Motivation to use curriculum—in the case of Chaney’s course the PCAs are required to complete yearly credits

Integrate activities to engage the learner (request information back from them to document that they have completed the training)

Build a very flexible system

3 types of web training:

stand alone—web only (can be ineffective)

assisted learning—with instructor

group delivery—extension, chat rooms, teleconferencing, closed video (expensive)

Know when to stop web-based training and pop-in interactive segments.

Incentives for participating in the training:

What are the incentives for a region or a state to do training. There is a lot of variability in the state coordinators within the regions. What is it going to take to get wheels on this program? (Do we need incentives? This training is mandated by congress. We don’t have buy-in from all extension directors and extension organizations.)

- extension administrators could make the training required
- participants will discover the resources available within their state
- provide certification or credit for attending
- keep it fun
- in-service training opportunities
- CCA credit?
- Provide SAN publications
- Connect agents with others who are already doing the work to use them as mentors.
- Develop the “Master Sustainable Agriculture Agent” program. Agents who meet these criteria would then qualify to attend conferences or obtain other professional benefits.
- After completing base training, participants would be eligible for additional travel funds or funds for on-farm research.
- (concern: incentives should not make more work for PDP coordinators.)

Is there a need for a certification program to have certified sustainable agriculture educators?
There may not be any motivation for agents to be certified.

How should the national curriculum be linked to the regional efforts? Also, how does the curriculum link to other information sites—national, regional, state levels?

National will present basic principles, a global perspective, and be available for new agent hires. National will stand alone, provide basic, standard information for all regions. National curriculum will form the foundation for regional training.

Regional and state will present local, site specific information, be more hands-on, and provide examples or case studies that are region-specific.

Concern:

- Do we know what information our agents need?
- Do we need to understand our audience before we proceed? Have we defined our audience thoroughly? Do we need to assess the audience?
- What technologies are available?
- What can we do with the funds we currently have?

Recommendation: Develop a 3 year training plan so PDP State Coordinators can plan training events for the next 3 years. This would help advisory teams plan state programs. The state training plan should include behavioral outcomes.

Marketing the Program

- Do we really want to call this “national curriculum”? (suggest taxonomy)
- How will we market to other organizations/agencies?
- Marketing program-show how this information can improve a county or state program. Commodity leaders would be in a position to receive this information.

Evaluation

- Use multiple methods—tests, projects
- How do we document training participants?
- Notify Extension Administrators, PDP Coordinators, county offices about who has attended training.
- In addition to counting numbers, we must measure changes in behavior, outcomes. This should be incorporated into the design of the course.
- Need financial support to conduct evaluation, include in workplan budget.
- NE—moved PDP state plan program to outcome based program, try to determine what people do differently as a result of training, use telephone interviews, ask them what they are doing differently. NE region is asking for names of participants who have participated in projects, in order to do a follow-up evaluation.
- Administrative council is involved in monitoring projects.

Design team recommendations to consider:

- Design team, identify good evaluation people and have them involved in the development process
- Document participation
- Follow up to see how they are using the information

- Pre- and post-tests, follow-up with phone call or email with 3 questions to see how they are using the information.
- Evaluation should be appropriate to what is developed.
- Do a baseline evaluation. Build pre and post testing into each module.
- How does the training fit into what a region or state does? National training should be packaged so PDP coordinators can use as part of their ongoing program.
- The program could be used for new agents, who are not part of the current program.
- May have to do a specific call for proposals for an in-depth evaluation.
- The trend in extension is getting away from individual training to centers. Must consider accountability, how much will it cost to train people?
- Evaluation should be addressed in the planning phase.

Curriculum

- Need peer review/quality control process.
- National curriculum is broad with no depth. The regional training is in-depth and will include more intensive evaluation, case studies, farm visits.
- The introductory piece is finite, has limits and does not need to be changed. Depth would not be added, but more subject area topics could be added.
- Write curriculum in a way that it can be used by a variety of audiences.
- Suggestions: Do not call program 'national core curriculum', just call it sustainable agriculture curriculum.
- Do we want to develop a one-hour training, or a longer curriculum with more information?
- Envision a comprehensive outline for training on sustainable agriculture, each state will make a decision about what training to conduct. Would use 5 national themes, then develop 3-or 4 competency levels. The comprehensive outline would consist of a list of competencies and list of proficiencies. This would provide the states with a guide.
- The audience would influence the design of the comprehensive outline.
- This outline would provide incentive for people to complete the training program.

Suggestion:

Assign a team to work on developing the outline. This is something the national office can do.

Audience

- The audience could include new employees right out of college, others may have 20 years of experience, and how do you meet the needs of both groups?
- We also need to consider the hiring situation, it has decreased so much.
- There are other groups as well, RC&D groups, people who have a change in assignment, other professionals who have an interest in sustainable agriculture. Design team must consider other audiences.
- Use the curriculum primarily for new hires. (How will we get them to use the training? Use of this product will vary by state.)
- Design team must consider the audiences and the different ways they will work through the modules. Language may be different.

- Audience—expand beyond extension, include other agriculture professionals. Those audiences need to be a part of the planning process.

National Design Team Representation:

1. Evaluation
2. PDP
3. Curriculum Web based instructional Design and programmers—
4. Target Audience 1890 and 1990 representatives, Debbie Roos, Vern G. northeast region (build representatives salary time into the budget.)
5. Subject matter experts

Charge for National Design Team:

- Complete curriculum outline, framework for national training, level one curriculum that will be coupled with regional training.
- Decide on the sequence of the development of the modules.
- Develop peer review process for different modules.
- Commit to completing the first unit and see how effective it is, test before moving further.
- Address the maximum marketing and presentation of the product.
- Time sensitive, set date that team will look at site and product.
- Design team must revisit the training topics identified at this meeting to ensure that all relevant topics are included. Some of the topics may need to be dropped or moved to another category.
- Identify the best evaluators possible.