









Successful farmers show and tell

What's the question?

What are the best ways to effectively train Extension agents and other agriculture professionals in the concepts and principles of sustainable agriculture? Participants in a survey administered at the 1996 Southern Region Sustainable Agriculture Consortium Workshop in Kentucky said:

-  Move out of the classroom and into the field (88%)
-  Use a workshop format (85%)
-  Involve farmers as trainers (77%)

Perceived as the least effective training methods were:

-  Speakers and conferences (38%)
-  Classroom training (28%)
-  Magazines and newsletters (19%)

Request complete copies of the survey results from *Common Ground*

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The idea was unconventional in every way. Traditional agricultural advisors toured farms to learn successful agricultural techniques from very unconventional farmers. The tours were part of an innovative Professional Development Project coordinated by Jim Palmer of Clemson and Sam Bass of South Carolina State University.

"Farmers being involved as primary teachers is a major breakthrough," says Jim Palmer. "We've traditionally used them in field days and such to emphasize land-grant recommendations, but I've never seen them utilized as they have been by the sustainable agriculture movement. Their knowledge is an incredible resource that has often been overlooked."

In the Piedmont area near Rock Hill, 52 people toured an antibiotic- and hormone-free beef operation, organic herb farm, conventional u-pick strawberry operation, a conventional dairy farm with some unique ideas

about waste management and energy conservation and a community supported agriculture operation.

The Pee Dee-area tour near Florence, with 57 attending, featured a worm/compost farm, organic tobacco and soybean farm, a colored cotton operation, a conventional vegetable production and canning operation and a conventional row-crop farm using extensive IPM practices.

The tours were just the beginning, says Sam Bass.

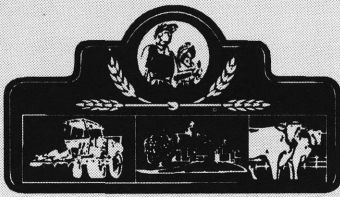
"Farmers often acquire knowledge not found in the laboratory or field test plots, giving more meaning to the phrase 'experience is the best teacher,' he says. "We must do more to identify the successful farmers and involve them in our curricula, as well as compensate them for their time and expertise."

In addition to the farm tours, classroom-style presentations were delivered on topics such as organic

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Mike James' demonstration of composting worms that detoxify heavy metals in industrial waste was rated a top learning experience. James, who sells both the high-value compost and the worms, has tapped an international market. Photo by Jim Palmer.



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From Farm Bill to farm fields

When the 1990 Farm Bill established the SARE program, it mandated that all agricultural Extension agents be trained in sustainable agriculture by the end of 1995. The legislation authorized \$20 million per year to support that training, but no funds were appropriated until 1994, a delay that made the 1995 goal unrealistic. On the other hand, the *research* component of SARE was funded immediately and in six years has achieved an enviable level of sophistication in both program development and research design.

While it is unfortunate that agricultural professionals have had to operate without federally supported training in this vital area, the delay has allowed researchers to develop a body of knowledge about sustainable agriculture that did not exist six years ago. Since most SARE projects are funded for three years, you could say we now have two generations of results from which to develop training materials.

With the appropriation of the training funds in 1994, the Southern Region Administrative Council held a competitive search for a management team and awarded a contract to a consortium of three institutions represented by Roger Crickenberger of North Carolina State University, John O'Sullivan of North Carolina A & T University and Jim Lukens of ATTRA/NCAT. This team is directed by a 12-member executive leadership committee, which is broadly representative of sustainable agricultural interests in the South. The committee reflects the SARE philosophy of partnerships that include 1890 and 1862 landgrant universities, farmers, NGOs and the Natural Resource Conservation Service.

A multi-level funding approach supports regional, multi-state and state training activities coordinated by the management team. Additional funding goes directly to the Extension service in each state and territory to develop and implement training through the 1862 and 1890 land-grant universities.

As the training component has taken shape, the name has changed to reflect an identity separate from SARE's research program. Originally it was called Chapter Three because of its placement in the 1990 Farm Bill documentation, which is like being called Page Forty Four because of where your name appears in the phone book. Briefly it was informally called the Extension Training Program, which added an air of exclusivity at odds with the rest of SARE philosophy. The now official title, Professional Development Program, conveys the purpose of the program and also recognizes the importance of training for NRCS staff, consultants and other information providers who are not employed by USDA Cooperative Extension Service.

The name change also reflects the dynamics of any new program whose success is vital to many different people. They all want it to succeed, but nobody is totally satisfied with it, meaning there is a healthy tension that stimulates improvements.

The stories in this issue of *Common Ground* highlight the achievements of the first round of training grants awarded in the Southern Region. These summaries may help you locate information you did not know existed. Take advantage of the contacts and additional information offered with each project summary.

Jim Lukens
Southern Region SARE
Professional Development Program

Learn is an active verb

Interactive is an understatement when describing the Southern Regional Training Workshop: Evaluating Sustainability. Mickie Swisher and Anne Bockarie coordinated the project, which was a collaborative effort of six institutions: the University of Florida, the University of Arkansas at Pine Bluff, Auburn University, Clemson University, the University of Kentucky and South Carolina State University.

At the two-and-a-half day workshop conducted simultaneously at four institutions, people from diverse walks of life came together to agree, disagree, watch videos, perform classroom exercises, read, debate issues in small and large groups, sketch field maps, count water critters and more.

The mix of activities was designed to accommodate the many different learning styles of adults and to help participants close the learning cycle by moving from affective learning to discussion of abstract concepts and, ultimately, to on-the-job applications.

The interactive discussion sessions were transmitted by satellite from the University of Florida to the University of Kentucky, South Carolina State

Show and tell

certification and sustainable ag strategic planning. Farmer panels presented additional firsthand sustainable farm experiences to the audience during the sessions.

How did the teachers take to being taught? Very positively, according to the detailed evaluation forms they submitted after the programs. In fact *increased farmer involvement* was the top-ranked recommendation for future training programs.

That's no wonder, according to Bass. "The actual results of applied research is the bottom line for Extension workers as well as for farmers," he notes. "Results obtained under actual



Clemson University entomology professor John Morse samples aquatic insects as part of a water quality session. Photo by Jim Palmer.

University, Clemson and the University of Arkansas at Pine Bluff. At all four training sites, local trainers led participants through field exercises in which two or more sets of comparable farming systems were studied, such as an organically and a conventionally managed vegetable farm or a small and large swine operation.

They conducted five different kinds of field exercises: biodiversity, energy analysis, economic analysis, land use capability and water quality. After completing the five analyses, the participants had fairly complete case studies of two comparable farming systems. They used the case studies in

Continued from page 1

field and economic conditions are more palatable than controlled research reports."

In ranking the individual components of the sessions, the participants chose the farmer panel as second only to Mike James' demonstration of earthworms transforming industrial waste into high-value compost, detoxifying heavy metals in the process (understandably a hard act to follow).

Thanks to those enthusiastic evaluations, agricultural advisors who missed the two sessions will have future opportunities to participate. The evaluations and pretest results are being used to refine South Carolina's strategic

closure discussions to illustrate principles of sustainability and to help them decide which of the tools will be most useful in their work situations.

Educational videos made for the classroom sessions, along with copies of the training manuals, are available to other agencies.

The next use of the materials will be a graduate level course delivered via the Internet and World Wide Web to secondary teachers and ag professionals at six institutions this fall. For more information call Mickie Swisher or Anne Bockarie at the University of Florida, Home Economics Department, (352) 392-1869.

plan for sustainable agricultural training. The 1990 Farm Bill mandated that each state must develop and implement such a plan.

"This project was being completed just as we were designing South Carolina's strategic plan, so much of it spilled over," says Palmer. "Both the on-farm and classroom sessions will be included, along with what we learned through the pretests and project evaluations."

The pretest and evaluation materials are available for others designing their own training programs.

For more information request the annual report for Project LST94-6.

Computing sustainable dairy systems

Just toting around the *Sustainable Dairy Systems Training Manual* will take some training—weight training. The tenth draft, which has expanded from five chapters in the original proposal to twelve chapters, now weighs about eight pounds. No one yet knows the approximate weight of the completed version scheduled for release in autumn 1996, but there is good reason for the heftiness. The manual supports a user-friendly computer program that will allow an Extension agent or producer to design dairy systems with the click of a mouse.

Clark Garland of the University of Tennessee Agricultural Extension Service and Steve Isaacs of the University of Kentucky are coordinating the landmark interdisciplinary, multi-state training program. A model of cooperation, the project utilized 25 trainers and more than 100 farmers, Extension agents and other agricultural leaders to produce the ultimate guide to developing customized sustainable dairy systems.

Using a computer in the agent's office or a laptop at the producer's kitchen table, the agent and farmer can answer questions about the current dairy operation and the desired changes. The program will automatically configure the economic and other data in the new system as it is being designed. In fact, the software is so sophisticated that if a change is later made in something, such as the number of stalls in a barn, it will recalculate the entire system. Topics include forage systems, milking centers, farmstead planning, financial management, labor recommendations, feeding, manure management and other variables.

The material for both the software and the manual is being developed and refined during actual pilot teaching sessions. To date, the cooperators have introduced the manual and software to 450 dairy farm families. They also are developing intensive farm management plans and financial plans with at least 110 farm families in Kentucky and Tennessee.



Lee Robey (right) of Adairville, KY, who owns a 400-cow dairy and also raises tobacco and row crops on 6,000 acres, is shown at a teaching session with Rob Holland (left), Tennessee Extension Area Farm Management Specialist.

"I'm not a big computer person, but it was really exciting when we sat down to do models and watched the numbers change on everything as we went from a 100-cow herd to a 250-cow herd," says Robey. "The size of your barn, the ventilation, everything was included in the changes."

"Five years ago, we built a 250-cow free-stall barn. If that program had existed then, I would have absolutely worn it out."

The program will be invaluable when dealing with lenders, according to Robey.

"When I need to make a decision, I have to base it on unbiased advice, not advice from a salesman," he says. "Lenders want projections, budgets and costs spelled out. This program will look at what I've got and help me figure out how to get the most out of it for the least expense."

Joe McKenzie, Extension Leader for Rutherford County, TN, was dubious about giving up three days of work to attend one of the sessions.

"After 26 years in the business, I don't get excited about much anymore," he recalls. "But that three-day training is the best compilation of materials I have seen in a long time. It will be useful for younger agents who don't have a large bank of experiences to draw upon. It will also be useful for evaluating manure management and grazing management systems."

"In my career, this is the first time I recall a joint effort of this magnitude between two states. I really appreciated it, and I heard other agents saying the same thing."

When completed, one copy of the software and the manual will be sent to each dairy county in Tennessee and Kentucky and to 1890 and 1862 land-grant universities in the Southern Region.

For more information request the report on Project LST94-4.

Raising rangeland management skills

When new Extension agents in Texas are bombarded with questions about stocking rates and forage monitoring, they find out how little they know about a subject area crucial to their clients. Rangeland management is not covered in animal science or agricultural education curricula. That educational shortage is becoming even more crucial now that ranchers are looking to reduce variable costs such as chemical applications for woody plant control.

J. F. Cadenhead and Richard Teague of the Texas A&M Research and Extension Center in Vernon designed a crash course in rangeland management to address that knowledge gap. The course consisted of three workshops held on working

ranches in July and October 1995 and March 1996. The time between sessions allowed agents to put their new knowledge into practice and bring questions back to the next session. The ranch locations allowed practical outdoor exercises such as range plant identification and monitoring of the forage supply and demand.

Topics included not only plant identification and rangeland monitoring but also stocking rate decisions, noxious plant management, prescribed burning, wildlife management and legal/ethical considerations for rangeland graziers.

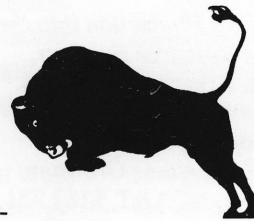
A compilation of materials related to rangeland management is being published as the *Texas Range Man-*



Participants fired up the range during prescribed burning sessions

agement Handbook. For information about the handbook or for more information about Project LST94-2 contact *Common Ground*.

Breaking constraints to MIG



Alan DeRamus of the University of Southwestern Louisiana began with a survey of what would-be graziers wanted to learn when he designed a management intensive grazing training program. Producers and agricultural advisors from Louisiana, Mississippi, Arkansas, Texas, Georgia, Alabama and Kentucky ranked the following as the major constraints against establishing intensive grazing management.

1. Personal management expertise of livestock and forages
2. Fencing systems
3. Operating capital
4. Soil fertility
5. Water availability
6. Livestock working facilities

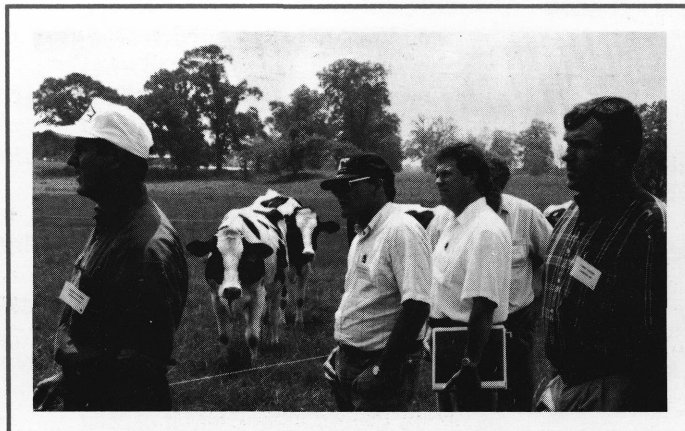
The training team of grazing experts from Louisiana, Oklahoma and Iowa, produced a three-day program to address such constraints in both classroom and field sessions. The program was conducted four times in 1995, with new sessions scheduled for May and September 1996.

Each participant receives a notebook containing the following fact sheets:

- **The role of ruminant animals in sustainable agriculture*
- **The forage growth and its relationship to grazing management*
- **Understanding soils and landscapes*
- **Estimating forage yield*
- **Grazing dynamics of beef cattle*
- **Proper grazing use*
- **Fringe benefits of rotational grazing*

**Economics of management intensive grazing*

To register for the May or September workshops contact Alan DeRamus at the University of Southwestern Louisiana, (318) 231-6642. Request fact sheets for Project LST94-3 from *Common Ground* editor.



The diversified farm at the University of Southwestern Louisiana was ideal for demonstrating management intensive grazing techniques. Photo by Emily King of Louisiana Farmer.



1996 Grant Awards

Research and Education Program

Controlling Cheat and Annual Ryegrass in Small Grains Using Novel Crop Harvesting Technologies, Oklahoma State University, \$208,624.

Soil Conservation and Pest Management Impacts of Grass Hedges, USDA-ARS National Sedimentation Lab., Mississippi, \$137,352.

Improving Integrated Resource Management Skills of Beef Producers, Oklahoma State University, \$163,642.

Sustainable Crop Management Systems for Improving Production of Culinary Herbs in the Virgin Islands, University of the Virgin Islands, \$143,529.

Integrating Pastured Poultry Production into the Farming Systems of Limited Resource Farmers, Heifer Project International, Arkansas, \$149,624.

Developing Sustainable Cropping Systems for Seedless Watermelon and Fall Lettuce Grown in Rotation with Green Manures, NCA&T, \$182,751.

Saving the Southern Legacy: Heirloom Plants and Local Knowledge for Profitable, Sustainable Agriculture, University of Georgia, \$152,817.

Multi-Cropping Cattle and Watermelon in the Southern Plains, Oklahoma State University, \$54,752.

Implementation of Alternative Agriculture Strategies for Rural Community Sustainable Development, The Nature Conservancy, \$228,517.

Producer Grant Program

Sustainable Cultivation of Medicinal Herbs as an Alternative to Tobacco as a Cash Crop, Tennessee, \$5,004.

Identification of Cover Crops to Enhance the Habitat of Specific Beneficial Insects in Sustainable Production Systems, North Carolina, \$9,462.

Alternatives to Chemicals in Peanut-Cotton Rotation, North Carolina, \$9,366.

Multiple On-Farm use of Aquatic Plants and Animals, North Carolina, \$9,575.

Native Warm-Season Grasses as Hay Source for a Goat Dairy, Texas, \$9,638.

Technical Assistance for Meat Goat Marketing, Kentucky, \$8,900.

Grazing Alternatives to Tall Fescue for Stocker Cattle, Tennessee, \$9,981.

Grasslands Matua and Grasslands Gala in the Tennessee Valley as Grazing Alternatives to Fescue and Ryegrass, Mississippi \$9,900.

Converting Poultry and Hog Housing into Aquaculture Facilities Emphasizing Recycled On-Farm Resources, North Carolina, \$6,000.

Group Strategic Alliances for Carroll County Feeder Calves, Kentucky, \$10,000.

Low-Input Sustainable Agriculture Short Course, Tennessee, \$9,650.

Professional Development Program

Sustainable Agricultural Marketing through Collaborative Policy Development, Delta Land and Community, Inc., \$40,900.

Sustainable Small-Scale Agricultural Development Training Project, Southern University, \$25,701

Southern Gathering on Agricultural Problem Solving, University of Kentucky, \$52,000.

Facilitating Farmer to Farmer Networks: An Experimental Approach, University of Florida, \$80,997.

News and notes from around the South

On-farm experience guides producer grant coordinator

Dr. John C. Mayne has been hired as the Southern Region SARE Producer Grant Coordinator.

John grew up in Florida and earned degrees at three southern universities, the latest being a doctorate in agroforestry from the University of Florida. His dissertation research was conducted in Costa Rica on nutrient uptake in systems used by farmers there. But it is his experience working with limited-resource farmers in Guatemala and his own small hog operation near Tallahassee that gives him rapport with farmers.

"The best thing to come out of those experiences," says John, "is finding out that being self-sufficient and less dependent on outside resources can help you ride out the vagaries of nature and markets."

As Producer Grants Coordinator, he will assist producers in everything from accurately submitting the proposal application to ensuring that research designs in funded proposals are appropriate. He will also visit projects once they are up and running, maintaining contact with the producer until the research is complete and final results are reported and disseminated to other farmers.

In response to requests from past applicants, John has changed the calendar for producer proposals.

"The application will be released in October, with January 31 as the due date for proposals," he says. "The autumn release and late winter due date will allow farmers more time to work on their proposals."

One of John's goals is to help producers understand that research design doesn't have to be intimidating.

"I will help on-farm researchers make sure that the work they do will also be applicable on other farms with similar conditions," he says.

For more information call John Mayne at (770) 229-3350.




Make your mark





SARE/ACE differs from other competitive grant programs in that the decision makers have first-hand experience with agriculture in their region.

Perhaps the most important people in the SARE/ACE process are the volunteers who evaluate submissions. Each year panels of farmers, researchers, economists, ag scientists, extensionists, agribusiness representatives, community activists and more independently review the proposals and score them on their contribution and relevance to sustainable agriculture and on technical merit. At least 100 reviewers are needed each year to ensure that each submission receives adequate evaluation attention.

The major qualifications are:

-  Knowledge of sustainable agriculture philosophy and techniques
-  20 hours in early September available for reviewing and evaluating proposals by mail
-  Experience with agricultural research design

 **Nodding acquaintance** of major research institutions such as 1862/1890 land-grant universities, NGOs and independent laboratories

 **Familiarity with agriculture's impact on the environment and rural communities.**

To apply, submit a two-page resume describing your background and experience in sustainable agriculture, as well as your knowledge of research principles. Mail it to Project Review Committee c/o *Common Ground* by July 1.

Panels will be established to ensure disciplinary, geographic and institutional balance across the Southern Region.

Reviewers will be notified of their appointment by August 1.

In early September, reviewers will be mailed 10-20 preproposals and evaluation worksheets which must be completed and returned to the SARE/ACE office by early November.

Calendar

1996

June 3-5 Administrative Council meets in Tallahassee, Florida.

July Call for Research and Education preproposals is mailed as insert in *Common Ground*.

September 1 Research and Education preproposals due. Review process begins.

October Call for Producer Grant proposals is mailed as insert in *Common Ground*.

November Administrative Council meets.

November 10 Authors of top-ranked Research and Education preproposals are notified to develop full proposals.

December 15 Research and Education full proposals are due.

1997

January 5 Full proposals are mailed to Technical Review Committee.

January 31 Producer Grant proposals are due.

March 15 Technical Review Committee meets to review full proposals.

April 1997 Administrative Council meets to award all grants

For information about the Professional Development Program calendar call Roger Crickenberger at (919) 515-3252.



One hundred years of results

"In 1896 they didn't call it sustainable agriculture, they just called it staying in business," says Charles Mitchell, Extension agronomist at Auburn's Old Rotation, the world's oldest continuous cotton experiment.

"This experiment does exactly what sustainable agriculture proponents are saying today, that outstanding crops can be grown year after year using only legume nitrogen," he continues.

As part of the centennial celebration, Extension agents and farmers demonstrated Old Rotation's principles in commercial cotton fields. Mitchell organized the SARE-funded demonstration that allowed comparisons between standard and new varieties of winter legumes on seven Alabama cotton farms. Road signs on field borders allowed regular commuters to keep tabs on the progress of the farm trials.

Although 1995, with its record drought, hurricanes and boll worm infestation, was a terrible cotton year for Alabama, the demonstrations supported what Old Rotation has been proving for 100 cotton seasons—that winter legumes alone are as effective as fertilizer N in producing optimum cotton yields. Additionally the legume protects the soil from winter erosion, increases soil organic matter and

contributes to long-term sustainability of continuous cotton production.

Other results indicate that the old standby hairy vetch provided the most nitrogen per acre (124 lbs.) as compared to the new A.U. Robin (75 lbs.). However, the A.U. Robin matures about two weeks earlier than the hairy vetch, making it fit better into the farmers' cropping programs. It was also determined that vetch is a host for reniform nematodes and should not be used in fields where reniform nematode populations are found.

The project culminated in the *Conservation Tillage Cotton Production Guide* which is

available from any Alabama Cooperative Extension office as Circular ANR-952.

The Old Rotation Centennial Celebration on October 4 will be held on the Auburn campus. A full day of entertainment and educational activities are planned to help agricultural advisors, farmers and consumers understand the significance of Old Rotation's 100 years of continuous cotton production. Miniature cotton bales made from the centennial crop will be available at the celebration.

For more information request report for Project LST94-5.

"In 1896 they didn't call it sustainable agriculture, they just called it staying in business."

Charles Mitchell, Auburn agronomist



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