Southern Region SARE Sustainable Agriculture Research & Education Program

Common Ground

Autumn 2006

Transitions

It's natural to imagine Peregrine Farm was always graced with orderly rows of vegetables and flowers—mulched and comfortably watered by drip irrigation. But as the story about Betsy and Alex Hitt reveals, that pastoral paradise was a quarter century in the making. Transitions are as much a part of farming as any other way of life.

Innovative farmers who make the time to investigate new research and find out what is working for other farmers have a better chance of staying viable. Such curiosity is just one of the qualities that earned the Hitts, the 2006 Southern Region Patrick Madden Award in honor of the gentle pioneer of sustainable agriculture and first director of the SARE program.

Other stories in this issue highlight Curt Rom of Arkansas who knows about transitions from a researcher's point of view. John Vollmer of South Carolina knows about the double anxiety of transitioning from tobacco to vegetables and from conventional methods to organics. Sometimes transitions are as easy as beekeepers trading noxious chemicals for a low-tech hive beetle trap.

For more such projects, type *transitions* into the search function of the project data base at www.sare.org.

Making Patrick Proud

In 1981, Betsy and Alex Hitt first saw the 29 acres west of Raleigh-Durham that they would nurture into Peregrine Farm. The rolling lay of the land was obscured by head-high weeds, and that was Alex's measure of head high—six feet and a few inches more. A stand of weeds couldn't deter a couple of young people armed with degrees somewhat related to farming and a desire to make their living from the land--a very small piece of land at a time when family farms were filing bankruptcy in record numbers.

Photo of Betsy by Debbie Roos

"Get big, or get out" was the advice being passed around by those in the know, including their new neighbors.

The Hitt's were too busy to listen. They built a tractor shed, pitched a tent to live in and started hacking away at the weeds. In March they planted their first crop—five thousand blackberry and raspberry bushes—right before a seriously dry April. Since they didn't have running water or electricity, they did what any good farmer would do, they toted water from the pond.

"We would fill five-gallon buckets by hand, put them on a trailer behind the tractor and drive slowly up the hill to the field, hoping all the water wouldn't splash out on the way," recalls Alex. "Then we'd carry those buckets up and down the 20,000 feet of row and pour a little bit of life-giving water onto each plant."

By late April the irrigation company they had contracted with completed installation of a buried drip system. "I joke with folks that we lived in a tent while we put in $6000 worth of irrigation, and I am still married to same wonderful woman!" Alex concludes.

While the Hitts were forging out a farm in North Carolina, a young researcher named Patrick Madden was taking a sabbatical from Pennsylvania State University that would change both his life and the future of agricultural research.

With a Ph.D. in ag economics and a stint as a consultant for President Lyndon Johnson's poverty programs, Madden had created for Penn State a new course of study on policy research with an emphasis on poverty.

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Download or print any project report from the project data base at www.sare.org

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While at Penn State he became friends with Robert Rodale in nearby Emmaus, PA, and it was inevitable that they would brainstorm about food, people and agriculture. They began wondering what would be involved in moving from a chemically intensive agricultural system to a more organic approach.

For Madden's sabbatical Rodale contributed travel funds for him to visit successful commercial organic farms of all sizes. He saw farmers doing things that scientists said would not work, but he also saw them doing a lot of expensive trial and error without ever knowing for sure *why* something did or did not work. It convinced him that farmers and researchers should be working together.

About the time the Hitt's were watering those berries by hand, Patrick was back at Penn State with a contract to study the land-grant system of research and extension. He had seen what the farmers were doing, now he was ready to examine the system that was supposed to be serving them.

Photo of Alex by Debbie Roos

"During that study, professors told me they would love to do systems research, but that they could get 10 journal articles published in the time it would take to conduct just one systems project," he told Jane Gates during a taped interview in 1990. "The reward system just wasn't set up to look at a whole system over a long period of time."

Madden wrote case studies of the successful farms he had visited, both to show the full spectrum of activities that went into whole farm experimentation and also to make the stories more relevant to other farmers. Those case studies gave him the germ of an idea for a program where farmers participate in planning, research, evaluation and dissemination of information to other farmers.

The 1985 farm bill gave its stamp of approval for something called "agricultural productivity research," which was embraced by Patrick and other like-minded researchers. A few years later these pioneers were invited to help design a USDA program in what would become sustainable agriculture.

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For more photos of Peregrine Farm see Growing Small Farm Website:
http://chatham.ces.ncsu.edu/growingsmallfarms/hittmadden.html

From tobacco to organic produce

In the early 1990s, John Vollmer, a third-generation tobacco and small grain farmer, knew that the outlook for tobacco farming was bleak. Between cuts in tobacco quotas, cheap imports and increased regulations, tobacco farming no longer made economic sense. "My main goal was to keep the farm in the family for the next generation," Vollmer said.

For Vollmer and his family, that meant "unhooking" from tobacco production and being open to new techniques as they kept an eye on the practical aspects of making a living.

"In 1992," he said, "we looked at strawberries and saw they were a very good crop." Moreover, Vollmer had seen the number of farms dwindle in his area from about 250 in the 1970s to just 30. He realized that organic production might provide a means to keep the farm viable. Finally, after learning of the Environmental Protection Agency's plan to eliminate methyl bromide for disease control, Vollmer decided that organic was the way to go.

Heartened by the fact that scientists at North Carolina State University were focusing on organic production to help make farms more profitable, Vollmer started asking for help.

"The extension agents would come to the farm and tap on my head lightly," he said of their effort to introduce him little by little to the concepts of organic farming. "They'd leave an article on the counter about how chemicals might affect earthworms, and eventually it would sink in."

While Vollmer does not farm all his fields organically, he has been so persuaded by improvements to soil quality, pH and water-holding capacity, that he applies many of the same techniques, such as compost and cover crops, to his non-organic fields.

Vollmer finds great success from direct marketing, and does not wholesale any product. "Every time we wholesale, we get beat up," he said. He and his family direct market all of their fresh market vegetables and fruits through five farm stands and at the farm. Bringing people to the farm provides entertainment for families and a boost in profits for Vollmer. On the farm, he and his family offer "u-pick" strawberries and sell strawberry ice cream and strawberry shortcake.

> "Without question it is our organic crops that are driving our increase in business."
>
> John Vollmer, 2006

Using a SARE grant (project FS98-083), Vollmer investigated how to convert one of his tobacco greenhouses to grow specialty crops - and now also has a successful lettuce operation. With the organic lettuce he provides recipe cards - and a ready-made salad mix of three types.

"The SARE grant was wonderful," he said, "as it allowed me to experiment without too much risk." At first, he was going to wholesale the lettuce, and then decided to direct market, taking the lettuce in Ziploc bags to the farm stands.

His lettuce operation offers one other benefit: increased contact with an engaged public. "I've now had more people coming to the greenhouse to look at what we're doing," said Vollmer, who thoroughly enjoys this part of farming. "People who come out to visit know it's important to think in sustainable ways, and they want to talk with me. I like the process of sharing what I'm doing."

This profile was excerpted from a longer story about Vollmer written by Diana Friedman in SAN's free 32-page booklet, Transitioning to Organic Production.

View the entire booklet at www.sare.org/htdocs/pubs or order a free copy from Mandy Rodrigues at (301) 504-5236 or san_assoc@sare.org

Helping farmers transition

York Glover was a 24-year veteran of the Clemson Cooperative Extension Service when he applied for a SARE On-Farm Research grant to evaluate the feasibility of South Carolina farmers transitioning to organic production. He is also a grower and is involved in three farmers markets in Beaufort, SC.

So why did this experienced producer and agent feel the need to do on-farm research?

"Actually, the push came from consumers asking for organic produce," says Glover, "So I thought it might be a niche for South Carolina farmers. It wasn't until I attended a SARE conference that I realized it required a whole different language. For example, when I was working with conventional methods, I could recommend treatments that would take two or three days to apply, but with organics the approach is to feed the soil, which takes much longer."

Being the practical sort, Glover decided the best way to learn was to experiment with organic methods on working farms rather than relying on printed information or even field trips to established organic operations. He submitted a proposal in 2003 and was awarded grant OS03-013 to help three experienced farmers make the transition to organic production and marketing. Two years into the project, Glover reports how they are addressing the major hurdles they have encountered: weeds and marketing.

Weed control has been the most difficult part of organic production so far, mainly because the farmers were so accustomed to the convenience of just spraying an herbicide as needed. Now, York reports, they have to plan ahead for weed control with cover crops, mulches and timing plantings to avoid, not only weeds, but also insect pests.

Marketing has not been as easy as they expected. While many of their farmers market customers say they appreciate the organic produce, few of them are willing to pay more than for conventionally raised produce. As a result the farmers are having to sell both their conventional and organic crops for the same price. Glover recognizes this is not a sustainable situation, so he is considering starting a CSA to find the customers who are willing to pay for the extra labor a farmer puts into organic production.

"One important piece of marketing information we have discovered is that the educated working class families are the ones willing to pay the price for organics," says York. "Not the wealthier retired population over in Hilton Head that we had anticipated would be our organic customers."

None of the farmers in the study are thinking about organic certification at this time because the expense would not be justified.

"I tell them to keep their records, in case they ever want to get certified," says York. "But for now our goals are to build soils and build markets."

That's good advice according to Owusu Bandele, a Southern University Agricultural Center professor, who is also an organic grower as well as a SARE sustainable agriculture coordinator for Louisiana. He served on the board that developed the national organic standards, and he recently conducted certification workshops in Georgia and South Carolina as part of a grant from the Initiative for Future Agriculture and Food Systems (IFAFS).

"Since certification can cost several hundred dollars, I advise farmers to consider whether certification will enhance their market." he says. "Do they anticipate selling to health food stores, chefs or other customers who require certification? If not it may cost more than is feasible, especially for the start up years."

For people who decide it is not yet feasible to certify their farm, he points out the regulations allow a grower who sells less than $5000 worth of organic products annually to label their crops "organic." They can't use the term "certified organic" or display the USDA Organic seal, and they must abide by the same record keeping rules as a certified grower.

Through his many contacts with producers and farmers markets, Owusu sees some untapped niches within the organic industry.

"Sources for organic seeds and transplants represent a large gap in the system," he says. "One of the participants in our workshops was from a laboratory that grows organic mushroom spores. Certified organic farms will be needed to supply all manner of seeds and transplants."

Another SARE project (LS03-156) aims to help farmers who want to supply just such a market. The multi-state team led by the Carolina Farm Stewardship Association will be producing organic seed production manuals, conducting workshops and coordinating a farmer seed grow-out program.

Researchers also transition

Dave and Amy Bentoski sell their produce at two Georgia farmers markets. Photos by Brenda Fayard

Even though the word *fun* doesn't often appear in research literature, a recent report by the Organic Farming Research Foundation (OFRF), found that at least some scientists used that term when comparing organic and conventional research. Reasons given for the fun factor were: the systems aspect of organic research is challenging, and the required collaborations of on-farm and interdisciplinary research led to more interaction with other people.

OFRF's new publication *Investing in Organic Knowledge* details impacts of the grantmaking program's first 13 years. Of the professional researchers who have conducted projects using OFRF grants, 70 percent of them believe that organic research is fundamentally different from conventional research. Besides the systems approach and the necessity of doing on-farm work, they also noted that having to use only organic compliant materials is restrictive and can be more expensive. At times it can mean less flexibility in dealing with weeds or other pests at the research site. However, the re-entry interval for sprayed fields or orchards is not an issue as it can be in conventional research. Lack of funding and a dearth of long-term research sites were listed as drawbacks to organic research.

That dearth of long-term research sites could be addressed on the very farms researchers hope to help, according to Georgia farmer Dave Bentoski.

"By nature farming is a on-going research project," he said by cell phone while harvesting okra. "Every season we try at least one new technique or crop, or perhaps we look for a better solution to old problems. I think the thrill of discovery is one of the things that keeps us hooked on farming."

Even though he keeps up with the latest information and goes to workshops when his schedule allows, Bentoski thinks nothing can replace on-site research for finding out what works and what doesn't.

"For example, I have some acreage not in production that would be perfect for researching the potential of organic grapes in this area. Or perhaps to set up a small multi-livestock grazing research program for rotating animals with my row crops. There are so many things we could find out, but I don't have the time, the research skills or the extra money to invest in it. That's where a researcher could step in and find out things that would help not only my farm, but others all over the South."

Potential collaborators for such research recently formed the Southern Organic Fruit Working Group to identify barriers to sustainable organic fruit production and to stimulate researched-based organic production systems throughout the Southern Region. University of Arkansas pomologist Curt Rom is one of the founding members.

"The SOFWG came about as a result of a couple of horticultural scientists in various states realizing there was no longer a critical mass of either scientists or growers in any one state," he said. "For instance, in Arkansas, we only have one fruit scientist and one fruit entomologist, we do not have anyone with fruit pathology experience. Also, because of the complexity of solutions and technologies needed for establishing organic production systems, a team approach would work best. Because of environmental, cultural, and sociological similarities in the entire region, it made sense to address problems from a regional rather than a state wide approach.

A researcher doesn't have to choose between organic and conventional systems, according to Rom.

"I still work on conventional agriculture systems, especially to make them more economically viable and more environmentally sound. In both cases, regardless of the production system, we are addressing agriculture questions and technologies with scientific methods."

Baiting the trap for small hive beetles

Many consider honey bees the building blocks of horticulture because of their role in pollination. Their honey production is sweet, too, with 17 million pounds harvested each year in Florida alone. Yet, the Florida bee industry faces a major threat from the small hive beetle, a damaging pest that for the past decade has been feeding on pollen and contaminating honey stores. Since Florida is a common over-wintering destination for bees, the infestation has spread throughout the eastern United States and is even taking up residence in California. A serious small hive beetle infestation causes bees to abandon their hives, leaving beekeepers without honey and their bee colonies.

Responding to pleas from beekeepers, SARE-funded researchers at USDA's Agricultural Research Service and the University of Florida worked on site with beekeepers to devise a trap that lures small hive beetles away without using purchased chemicals, which leave residues in honey. They built upon the work of Drion Boucia, a University of Florida researcher, who discovered that hive beetles release an alluring yeast.

"When the yeast grows on pollen in the hive, it attracts more beetles with a cascading effect," said Peter Teal, an ARS research leader in Gainesville. "It disturbs the bees and they leave."

Researchers put the yeast to work for them. Collaborating with half a dozen beekeepers in a SARE on-farm research grant, they installed traps baited with yeast below each hive, separated by sliding doors drilled with conical holes. Hive beetles can squeeze through into traps, but not return.

A beekeeper with the non-toxic, low-tech, one-way-no-return trap for small hive beetles.

"Female beetles lay eggs in the trap, so we routinely catch 10 times more larvae than adults," Teal said.

Teal predicts the traps will solve the problem for small-scale beekeepers, whom he says make up 60 percent of the industry, because they typically tend their hives daily and can clean their traps. For large-scale beekeepers, who maintain up to several thousand hives, Teal and his team are hoping to develop a new trap requiring less management.

Their findings are timely. Beekeepers throughout Florida are waiting for traps to become widely available commercially. "We have a horrific pest that's redefining beekeeping," said Jerry Latner, manager of a beekeeping supply manufacturer. "If they perfect the lure, it will be a great benefit."

For more information, go to www.sare.org/projects and search for OS04-022.

This story was excerpted from SARE 2006 Highlights. For a copy of the entire publication visit www.sare.org or contact *Mandy Rodrigues at (301) 504-5236 or san_assoc@sare.org*

Black Environmental Thought Conference, May 2007

Black Environmental Thought: Land, Power and Sustainability is the title of a conference to be held at the Kellogg Conference Center in Tuskegee, May 22-24, 2007. Papers and posters on any aspect of Black environmental and agricultural thought are invited until November 1.

The conference is sponsored by Southern SARE, the Federation of Southern Cooperatives, the AfroEco Group, Tuskegee University, Fort Valley State University and the University of Georgia.

For more information go to www.blackenvirothought.org

Which SARE grant program for you?

Southern SARE administers seven grant programs, each with its own priorities and audiences. The SSARE web site www.southernsare.org is the quickest way to receive the calls for proposals as soon as they are released. Proposals must be submitted on-line according to instructions in the calls for proposals.

Research and Education Projects (including Planning Grants) generally are conducted by interdisciplinary, multi-institutional, and often, multi-state research teams coordinated by a principal investigator from a non-governmental organization, university or governmental agency. These projects include farmers as participants. **Planning Grants will not be offered this year.**

2006

March	Call for R&E preproposals
June	R&E Preproposals due
August	Full R&E proposals requested
Nov.	Full R&E proposals due

2007

February	Administrative Council announces grant awards

Graduate Student Awards are intended for full-time graduate students (masters or Ph.D.) enrolled at accredited colleges and universities in the Southern Region. Up to $10,000 will be awarded to each successful applicant for up to three years of project activities. The funds are paid directly to the university for use on the graduate student's project.

2006

March	Call for proposals released
November	Proposals due

2007

February	Administrative Council announces grant awards

Professional Development Program Projects train agricultural information providers in sustainable agriculture techniques and concepts.

2005

March	Call for preproposals released
May	Preproposals due
November	Full proposals due

2006

February	Administrative Council announces grant awards

Producer Grant Projects are developed, coordinated and conducted by producers or producer organizations. These projects are generally located in one state, often on one farm. There is a $10,000 limit for funding proposals submitted by an individual producer and a $15,000-limit on proposals submitted by producer organizations.

2006

September	Call for proposals released
December	Proposals due

2007

February	Administrative Council announces grant awards

On-Farm Research Projects are conducted by agricultural professionals such as extension agents, NRCS and/or NGO personnel who currently work with farmers and ranchers. Cooperators must include at least one producer at all stages of the project. Funded for a maximum of $15,000 for up to two years of activities.

2006

September	Call for 2004 proposals released
December	Proposals due

2007

February	Administrative Council announces grant awards

Sustainable Community Innovation Projects link community development with sustainable agriculture. Level 1 funded for a project maximum of $10,000 anywhere in the Southern Region to farmers, ranchers, researchers, community organizations, environmentalists, ag and community development professionals, entrepreneurs, governmental and non-governmental organizations. Level 2 funded for $50,000 project maximum is open only to not-for-profit entities in certain Southern Appalachian counties.

2006

July	Call for proposals released
November	Proposals due

2007

February	Administrative Council announces grant awards

Making Patrick Proud

Continued from page 2

In the interview with Jane Gates, Madden describes assembling a committee, writing funding guidelines, choosing host institutions and funding the first round of projects—all in six months. Congress was impressed enough with the efficiency and the participatory nature of the program that they immediatly boosted funding by 10 percent for the fledgling Low Input Sustainable Agriculture (LISA) program.

Back in North Carolina, Peregrine Farm was productive enough that the Hitts started selling at the Carrboro Farmers Market in 1986 and saw their profit margins jump. They began sharing what they learned with others, foreshadowing what Madden dreamed would happen.

In 1990, Congress codified into law all the things Madden and the committee had written, and they also gave the program a 50 percent increase in funding. The name was changed from LISA to Sustainable Agriculture Research and Education (SARE).That was the same year Peregrine Farm reached a milestone: Alex could stop painting houses and join Betsy full time in the field.

In 1994, Alex agreed to serve on the Southern Region Administrative Council where he helped shape the direction of research for the next six years, becoming the first producer chair of Southern Region SARE.

Throughout their careers Betsy and Alex have continued to share what they've learned, viewing other farmers not as competition but as partners in growing good food for their communities. As a result, Peregrine Farm has been used for research, field days, tours of all kind. Alex has been a regular presenter at the annual Southern SAWG conferences.

Despite their parallel routes through a changing agriculture the Hitts never met Patrick Madden.

"The closest we came was in 1994 or 95," says Alex. "He preceded me as a speaker in a conference on the indicators of sustainability."

During her interview with Madden, Jane Gates asked what message he would like to leave for people who watched the video in the future: "Joy and commitment," he said. "I see so much cynicism, and there's no joy in it. Life is so much more enjoyable if you latch onto something you love and give it your best."

Madden, who died in 2001, would be proud of how the Hitts latched onto Peregrine Farm and give their best for their land, their crops and their customers.

Patrick Madden's video interview with Jane Gates is available from the National Ag Library: www.nal.usda.gov

Hear Melissa Block of All Things Considered interview Alex while turkeys gobble in the background.
Go to www.npr.org
Use the search terms:
Alex Hitt or Peregrine Farm or Madden Award.

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