

SUSTAINABLE AGRICULTURE

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Farm-to-hospital: New initiatives link local farms with institutional food

by Elizabeth Sachs and Gail Feenstra, ASI/SAREP

A hospital replacing its No. 10 cans with fresh roasted winter vegetables from nearby farms? It might sound like a recovering patient's post-anesthesia dream, but it's happening at some San Francisco Bay Area hospitals.

These hospitals are at the forefront of a growing movement to introduce locally produced food on patient trays and cafeteria menus. Buying from local farmers and ranchers is part of the current trend toward better quality and flavor in hospital meals, both to satisfy consumer demand and to address concerns about dietary contributions to chronic disease.

Given their mission to promote and preserve health, hospitals would seem to be a natural market for fresh, local, seasonal fruits and vegetables. But like most large food operations, hospitals are served primarily by national food service distributors that make planning and preparing meals consistent, efficient, and cost-effective largely by centralizing and consolidating their sources. Naturally, these supply chains have evolved away from smaller, regional producers, but diverse Bay Area "farm-to-hospital" initiatives are now helping to forge local links.

We recently completed an exploratory study of these emerging initiatives. Although most efforts are still in their early stages, we found they are rapidly gaining ground: local mixed lettuces in the salad bar, grass-fed beef from nearby ranches in the café hamburger, and a

[See FARM on p.2](#)

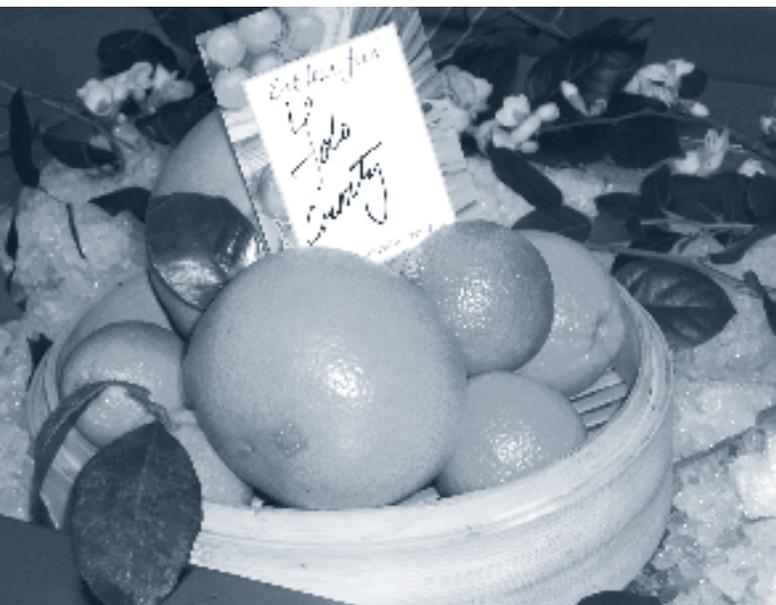


Alison Negrin, executive chef at John Muir Health System stands near fresh herbs growing outside hospital kitchen (right). Misael Aquirre prepares roasted winter vegetables for hospital (center), while Marifi Aiello assembles fresh salad for hospital cafeteria. (photos by Elizabeth Sachs)

FARM CONTINUED FROM PAGE 1

“local, seasonal fruit of the day” on patient lunch trays. Not only do farm-to-hospital projects make for tastier meals, but they are also highlighting important intersections between agriculture and public health, and contributing to the growing voice for sustainable agriculture in the health care sector.

Alison Negrin, executive chef at John Muir Health in the East Bay, has replaced all frozen vegetables with fresh produce, most



Capay Valley citrus featured at John Muir Health System cafés.
(photo by Elizabeth Sachs)

of which is grown within 150 miles of the hospital. At John Muir’s café on the Concord campus, you’ll find bowls of citrus fruits from Capay Valley orchards and steam trays of fresh caramelized broccoli and cauliflower grown in Monterey County. The changes are part of a cafeteria makeover that Negrin, after years in some of the Bay Area’s best known restaurants, took on as a professional challenge. They also reflect the leadership of a hospitalwide food committee, which developed an overarching food policy that includes a formal commitment to purchasing locally grown food.

Of course, just replacing food service cans and frozen bags with locally grown vegetables won’t curb skyrocketing rates of obesity and heart disease, but it may encour-

age patients and café customers to increase their daily intake of vegetables. And if there’s one piece of steadfast advice from the ever-changing world of nutrition science, it’s to eat more fruits and vegetables.

Access to the diversity and flavor of fresh seasonal produce is thought to promote higher consumption of fruits and vegetables. A recent study in the January 2008 issue of the *American Journal of Public Health* found that coupons to area farmers markets led low-income women to eat twice as many extra servings of fruits and vegetables a day as women given coupons to grocery stores.

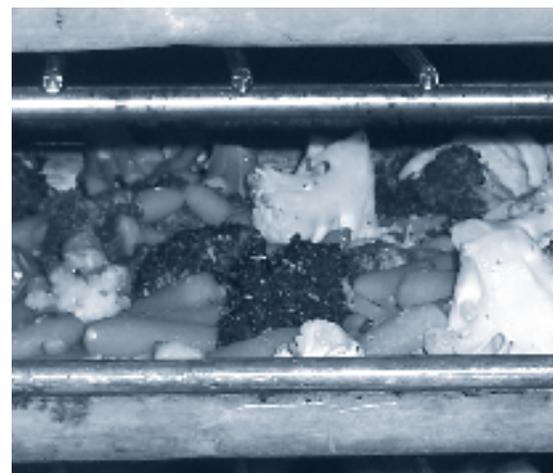
Aside from nutritional benefits, the farm-to-hospital movement represents new potential for hospitals, which buy more than \$12 billion of food every year, to build community relationships and support a diverse array of regional farms. Showcasing local food is also a way to attract staff and patients to

hospital meals, and several food service operators have identified increased sales that came with a switch to local, seasonal offerings.

But do hospitals, with their vast financial and regulatory complexities, really represent a substantial market for local food? We wanted to know more about the unique operating environment of health care food service, and the issues that face hospitals seeking to buy locally produced food. Our report, “Emerging Local Food Purchasing Initiatives in Northern California Hospitals,” (<http://sarep.ucdavis.edu/cdpp/fti/>) is intended to describe the key institutional and industry conditions affecting farm-to-hospital prospects, and suggest where further research, policy, education, and technical assistance are needed to expand these prospects.

Like other kinds of institutions that have pursued local food sourcing, such as K-12 schools and colleges, hospitals are faced with a wide range of contractual obligations and financial constraints that limit procurement flexibility. Hospitals also have many layers of carefully regulated procedures for menu planning and meal production related to patient diets. We looked at many of the variables that affect the environment for local food purchasing in hospitals, including service division (patient meals vs. cafeteria vs. catering,) patient dietary regulation and modified diet needs, menu rotation practices, food preparation and production systems, administrative relationships within a multi-hospital system, and organization of labor.

We also examined the wider context for local food purchasing in hospitals. Local food is difficult to incorporate into hospital food supply chains, which include numerous other institutions, including international food service distributors and Group Purchasing Organizations (GPOs.) Although some hospitals have partnered directly with local producers, most are finding that working with these existing food suppliers is a necessity. GPOs typically negotiate food supply contracts that keep prices low and supply steady, and contracts rarely permit hospitals to buy more than 10 or 15 percent of their food off-contract. Also, most hospitals operate with lean staffing, making the management of many separate vendor accounts and deliveries highly impractical.



The established food service suppliers—companies like Sysco and U.S. Foodservice—have little experience in sourcing local food and their business models do not easily accommodate the diversity and variation of local products. Similarly, local producers frequently find working with these distributors an inconvenience, and may not meet corporate requirements regarding liability insurance and other issues.

Nonetheless, a group of pioneering food service leaders is creating paths to local purchasing. The Bay Area Hospital Leadership Team, formed in late 2006, meets monthly to share strategies and combine efforts on sustainable food initiatives, including local sourcing. Members of the Leadership Team exchange lessons learned from their own product research and purchasing experience, and have joined forces to bring major foodservice suppliers to the table. In a recent effort, members called on U.S. Foodservice to add California-raised free-range poultry products to its catalogue. Although the request was successful, the hospitals are still working with U.S. Foodservice to access pre-cut chicken products that better fit their preparation methods.

The team is supported by the nonprofit San Francisco Bay Area Chapter of Physicians for Social Responsibility (SF PSR), a local collaborator in the national Healthy Food in Health Care campaign, which works to engage hospitals in an “ecologically sound, economically viable, and socially responsible” food system. Our SAREP farm-to-hospital

study was aided by a partnership with SF PSR, which provides education and technical assistance to hospital food service professionals as well as organizes clinician-based advocacy for environmental health.

For local hospitals in this network, tactics to increase local food have taken a variety of forms. One approach has been to establish hospital committees that involve senior leaders and clinical staff in food decisions. Formal written food policies guided by timelines and benchmarks are another means of institutionalizing food priorities. Some food service directors, such as **Linda Hansen** at St. Joseph’s Hospital in Santa Rosa, have requested—and won—additional funding from the hospital budget for food initiatives. On-site farmers markets and employee produce baskets, as well as partnerships with community-based groups such as Community Alliance with Family Farmers (CAFF) and the Agriculture and Land-Based Training Association (ALBA), have also aided local food visibility in many Bay Area hospitals.

We suggest that moving farm-to-hospital projects forward will require a dual approach: working within the constraints of the existing institutional framework on small, informal projects, and identifying new ways to influence suppliers and effect systemic institutional change. For instance, more and more hospital food service buyers are asking producer suppliers to list geographic and farm origin of products in their catalogues. Suppliers have been resistant to providing this information because of the extra work

required, but those that do are now seen as having a competitive advantage by their hospital customers.

Indeed, market competition and consumer trends may be changing the position of food service distributors that local food does not promise much volume or profit. Sysco chairman **Rick Schneiders** has stated publicly that buying from mid-scale farms, differentiating products by origin, and participating in regional food “value chains” are new goals for the company, for example. Nationally, at least one institutional food management company, Bon Appetit Management, has made a name for itself with local sourcing, and Bay Area hospitals such as John Muir, Kaiser Permanente, and Santa Cruz’s Dominican Hospital have reaped media attention for their local food projects. Under increasing pressure to compete for patients, serving local food could help differentiate a hospital’s services. In this “info-centric” era, it’s likely that appealing menus will attract medical shoppers along with high-profile doctors, private rooms, and the latest diagnostic technology.

SAREP and SF PSR are currently collaborating on an outcomes evaluation of the Bay Area Healthy Food in Health Care program, which is comprised of various services and resources for increasing sustainable food purchasing in hospitals. This study will provide further analysis of the mechanisms by which hospitals are introducing fresh wholesome foods to better align with preventive health goals as well as address their community and environmental responsibilities. Our project is aimed at analyzing the impact of these new approaches, identifying opportunities to deepen the links between the health care and sustainable agriculture sectors, and creating a collaborative road map for systemic change.

Note: Elizabeth Sachs is a graduate student in the UC Davis Department of International Agricultural Development working with Gail Feenstra, food systems analyst with the UC Davis Agricultural Sustainability Institute (ASI) and UC SAREP.

Roasted winter vegetables from nearby farms are served at John Muir cafés. (photo by Elizabeth Sachs)



Notable events

Compiled by Lyra Halprin, ASI/ SAREP

High honor for Chaney

The USDA Western Region SARE program has recognized **David Chaney**, ASI/SAREP education coordinator, for his “outstanding efforts, leadership and dedication” as SARE state coordinator for California. Chaney has been both national and state sustainable agriculture education coordinator for more than 13 years; he received the commendation from national SARE director **Jill Auburn** (former UC SAREP associate director). Auburn described Chaney’s outstanding work integrating educational tools and products from competitively funded Professional Development Projects in his state level program; she noted Chaney’s work has benefited the “true land grant mission of the University of California.” Chaney, who began working at UC SAREP 20 years ago, took on the Western SARE responsibilities in 1995. As state SARE coordinator, Chaney has provided greater access to Western Region and national SARE resources, strengthened professional development opportunities



David Chaney

for Extension advisors and other agricultural and community development professionals, and developed educational materials for agricultural professionals’ work with California farmers and ranchers. Among the many projects and products he has coordinated are an online course *Ecological Pest Management*, workshops and educational materials on agricultural direct marketing, and the *Organic Farming Compliance Handbook* for Western Region agricultural professionals. “His work performed in the area of sustainable agriculture in California has helped shape extension education and farmer-rancher programs, and elevated awareness of sustainable agriculture in general,” Auburn said.

SAFS names research manager

Martin Burger, an agroecologist with a background in soil science and plant physiology, has been named research manager of the UC Davis Sustainable Agriculture Farming Systems (SAFS) project, an ASI affiliate. The SAFS project has looked at reduced tillage, the use of cover crops, drip irrigation and other sustainable farming practices for almost 20 years. Its main project site is UC Davis’ Russell Ranch Sustainable Agriculture Facility, which is also home to the campus Long-Term Research in Agricultural Systems experiment. Burger, who was a post doctoral researcher at UC Davis, is working with more than 20 SAFS principal investigators and UC Cooperative Extension farm advisors, more than a dozen farmers, and other researchers, graduate and undergraduate students.

SAFS project receives \$90,000 grant

The SAFS project has been awarded \$90,000 by the Kearney Foundation of Soil Science to study the water-cleansing effects of cover crops under reduced tillage practices. The grant will allow researchers to look at the ef-

fects of crop debris jams in irrigation furrows when cover crops are planted and allowed to remain in the fields. Slowing irrigation water in the furrows increases water infiltration and reduces the amount of runoff entering streams and rivers, according to project principal investigators **Will Horwath** and

Wes Wallender, professors in the UC Davis land, air and water department. Post doctoral researcher **Damodhara Mailapalli** is also working on the project.

Students receive sustainability grants

In the second year of its biannual grant program, the UC Davis Campus Sustainability Advisory Committee awarded \$18,475 to support nine projects fostering a more sustainable campus through research, education or planning. Recipients of the fall 2007 competition for Campus Sustainability Grants included ASI-affiliate Students for Sustainable Agriculture (SSA). The \$2,800 award will fund *Increasing Engagement in the Campus Food System*. SSA members named on the grant include **Alida Cantor**, **Sean Smukler**, **Tianna Dupont**, graduate students; **Danielle Lee**, undergraduate; **Rory O’Dwyer**, staff. The grant will support several projects to increase students’ and administrators’ understanding of sustainability in the food system. Many SSA members will contribute to the projects, which will include:

- development of a campus food guide that will help students, staff and fac-



Carrot taste test. (photo by Ryan Galt)

ulty find sustainably produced food on campus and in Davis. The guide will be part-information guide and part-literary magazine (essays, poems, recipes, drawings), according to Cantor. She is accepting submissions at aacantor@ucdavis.edu.

- two posters that portray the connection between the campus Coffee House, Student Farm and Project Compost, which will be displayed at the Coffee House and Student Farm.
- an exhibit of student art inspired by food and agriculture on the quad as part of Local Food Week in Fall 2008.

ASI at 'Focus the Nation'

Several ASI affiliates participated in the January 31 *Focus the Nation* at UC Davis, part of a national teach-in about climate change solutions. SSA had a booth at the Idea Fair on campus, and encouraged visitors to participate in its local organic vs. conventional carrot taste test, and tips for "cool eating" activity. Seventy-two participants voted for the taste of local and organic carrots vs. 32 for conventional and non-local. **Sean Smukler**, a graduate student in ecology and a member of SSA, moderated an afternoon panel *Agricultural sustainability and climate change: Vulnerability, mitigation and adaptation*. Speakers included ASI/SAREP director **Tom Tomich**, and **Louise Jackson**, professor and extension specialist in the LAWR department, and a SAFS team member.

Training workshops

UC Davis Children's Garden Program director **Carol Hillhouse** and staff member **Jeri Ohmart** (also of SAREP) along with staff from the UC Santa Cruz Life Lab Science Program, presented two workshops in February on "Creating and Sustaining Your School Garden." The trainings were part of an ongoing effort to support the approximately 4,000 schools across the state receiving California Instructional School Garden grants of

\$2,500 to \$5,000. The first workshop was at Baird Middle School in Fresno, and was presented in collaboration with school staff and staff from Fresno County's UC Cooperative Extension Youth Food Stamp Nutrition Education Program (FSNEP) and Master Gardener Program. School teams from seven area elementary and middle schools learned strategies for implementing their school garden programs. The event included a parallel *Train-the-Trainers* strand for Master Gardeners and FSNEP staff who will continue to provide technical assistance to schools in the region over the next several months. The second workshop was designed for Master Gardener trainers in collaboration with **Pamela Geisel**, UCCE Statewide Master Gardener Program coordinator. It took place at the UC Davis Student Farm and was attended by Master Gardener teams from seven counties. These groups are now ready to extend the "Creating and Sustaining Your School Garden" workshop model to schools in their regions.

Mérel dissertation honors

Pierre Mérel, new UC Davis agricultural and resource economics assistant professor and ASI affiliate, was honored with the 2007 Gordon A. King Award for best dissertation by his department. His dissertation, "Three Essays on Supply Control Policies in Protected Designations of Origin," will also be nominated for the American Agricultural Economics Association Outstanding Doctoral Dissertation Awards. His specialty is the economics of agricultural sustainability.



Teachers and Master Gardener participants get to know one another over a garden exploration activity workshop in Fresno. (photo by Sara Candelaria)

Co-authors

Gail Feenstra, food systems analyst for ASI/SAREP, is the co-author of an article in the just released January 2007 *Food for Thought* journal on "The Roles of Farmers Markets in Fueling Local Economies." **Tom Tomich**, ASI/SAREP director, is a co-author of "The role of land tenure in the development of cinnamon agroforestry in Kerinci, Sumatra," with S. Suyanto and K. Otsuka. The 2007 chapter appears in *Voices from the Forest: Integrating Indigenous Knowledge into Sustainable Upland Farming*, edited by M. Cairns, published by Resources for the Future, Washington, D.C.

ASI at EcoFarm

Robert L. Bugg, ASI/SAREP agricultural ecology analyst, moderated "Thinking Outside the Hive: Gardening for Pollinator Conservation," at the Ecological Farming Association's 28th annual conference in the Asilomar Conference Grounds in January. **Jeri L. Ohmart**, project coordinator at the UC Davis Children's Garden Program at the ASI-affiliated Student Farm, was on the panel, "News from the Expanding Farm-to-Institution Front." Bugg, an entomologist, has worked on conserving beneficial insects for many years. Ohmart and co-presenters discussed the efforts to get produce from local family farms into colleges and universities, health care facilities, corporate cafeterias, and school districts. Ohmart has also participated in research on farm-to-school salad bars at ASI/UC SAREP.



Red seeded table grapes. (photo by Jennifer Hashim-Buckey, UCCE Kern County)



Biologically Integrated Farming Systems for Table Grapes extended

by Walt Bentley, IPM entomologist, Kearney Agricultural Center

Our UC Cooperative Extension/SAREP project aimed at enhancing California's table grape production was awarded a two-year extension from the U.S. Environmental Protection Agency (US-EPA). The extension will allow the Biologically Integrated Farming Systems (BIFS) for Table Grapes project, which began with a \$200,000 grant from US-EPA's Region 9 Food Quality Protection Act grant program in 2005, to continue through 2009. It gives us a tremendous opportunity to incorporate many new, tested and successful practices into the project. California is the number one producer of fresh grapes in the United States.

We are now able to expand into Riverside County's Coachella Valley with the project, which began with table grape farmers in Fresno, Tulare, and Kern counties. Viticulture advisor **Carmen Gispert** will be spearheading the effort in the south.

Additionally, we have been able to add a new cooperating table grape farmer from Arvin, **René Garcia**. Garcia and his family are farming Red Globe grapes, a variety currently plagued with vine mealybug. Garcia's Arvin location will allow us to further test new management techniques and insecticides that are effective on the target pest, selective to parasites, and safe for the environment. Garcia and Gispert are both welcome additions to the table grape BIFS project.

Since cosmetic appeal is important for fresh grapes, there is low tolerance for pest damage to the fruit. This project helps farmers use lower-risk pesticides that target specific pests without wiping out beneficial insects or their habitats. Project cooperators are closely monitoring the vines to determine the exact dates insect pests are most vulnerable to pesticides, which prevents unnecessary pesticide applications. Project participants also use alternative biological and cultural controls including vineyard floor and canopy management practices. Many of the targeted high-risk materials contribute to air and water pollution with their volatile organic compounds or through leaching and run-off.

California is ranked first in production of table, wine and raisin grapes in the United States. About 85 percent of California's table grape production is in the Southern San Joaquin Valley region. By focusing attention on fresh grape growers in Fresno, Tulare, Kern and Riverside counties, the project reaches most of California's 600 fresh grape growers. Many fresh grape growers have already begun shifting to a more environmentally sound farming system. This project continues to offer opportunities for "farmer-to-farmer" information sharing and brings scientists, farmers and consultants together in a collaborative environment that enables farmers to adapt new practices to local conditions.

In the first two years of the project (2005-07), it became clear that many table grape farmers were adopting integrated pest management practices such as monitoring, using reduced risk pesticides and drip irrigation practices, and addressing herbicide and fungicide

resistance issues. The biggest pest management challenges the industry faces are vine mealybug and black widow spider, and their management presents two special problems. Currently the most effective management for both these arthropod pests (one invasive and the other a predator) has been a well-timed application of chlorpyrifos (Lorsban). This organophosphate, however, has been found in surface water throughout the San Joaquin Valley and contributes significantly to volatile organic compounds in the air. Alternatives, which will be available next year, will be used by our cooperators and demonstrated to other table grape farmers.

Adding to the challenges for California growers is the fact that 40 percent of table grapes are exported. The exported grapes account for almost 70 percent of gross U.S. table grape income. Countries importing U.S. table grapes, including England, Australia, New Zealand and many Asian countries, are concerned with vine mealybug and black widow spiders. They do not have these pests and don't want them. So, even though grape

farmers may feel confident that they have managed black widows and vine mealybugs, they don't want to risk losing a shipment overseas by not using the most effective pesticide (chlorpyrifos).

California table grape farmers have many restrictions on their crop, and this project will allow us to address their challenges. In the past two years, we have demonstrated the effectiveness of monitoring and precisely timing reduced-risk products on insect and weed pests. Each of the six farms in the project used reduced-risk products and has had identical pest control as farms treated with a more traditional broad-spectrum approach. Pests such as western flower thrips, western grape leaf skeletonizer, grape leaf folder, grape leafhopper, spider mites and phylloxera have not developed into problems, regardless of the management

approach. The costs of a reduced-risk program appear to be almost identical to more conventional management practices.

We look forward to Garcia, the new Coachella cooperators, and the six current table grape farmers helping demonstrate management techniques that are environmentally friendly and favored by consumers. I believe we can do this and, in the process, benefit table grape farmers throughout California.

The costs of a reduced-risk program appear to be almost identical to more conventional management practices



René Garcia is a new cooperating table grape farmer from Arvin working with the BIFS project. (photo by Jennifer Hashim-Buckey, UCCE Kern County)

ASI's new deputy director, complementary roles of UC sustainable ag programs

It is my great pleasure to announce that **Kate Scow** is the new deputy director of the Agricultural Sustainability Institute (ASI). Kate, an investigator of soil microbial communities in agroecosystems, succeeds our friend and colleague **Howard Ferris**, who is on sabbatical in Costa Rica. Howard's assistance as ASI took its place at UC Davis and within the UC system has been invaluable.



Kate Scow

I am delighted that Kate has agreed to work with us in our collaborative efforts in agricultural sustainability. This is an important time for sustainability research and outreach, and Kate is outstanding in both areas. In addition to working on projects aimed at sharing integrated farming systems developments with growers, she has been the direc-

tor of the Kearney Foundation of Soil Science, and is affiliated with the UC Davis John Muir Institute for the Environment.

A soil microbiologist and professor in the UC Davis land, air and water resources department, Kate is working with me and collaborators in several campus and statewide programs to extend the work of the ASI. Her main task is to help develop a new science agenda for UC Davis' Russell Ranch Sustainable Agriculture Facility, which includes Sustainable Agriculture Farming Systems (SAFS) and Long Term Research on Agricultural Systems (LTRAS) projects.

Like Howard, Kate has been involved in the SAFS project for nearly 20 years, and has conducted research focused on the role of soil microorganisms in carbon and nitrogen cycling, decomposition of organic matter, and biodegradation of pesticides and organic pollutants. I am very happy that she's excited by this opportunity to contribute to the evolution of the ASI and to be involved in defining and promoting sustainable agricultural practices for California and beyond.



I also wanted to note how much I am stimulated and excited by the evolving relationship between ASI/SAREP and UC Santa Cruz's Center for Agroecology and Sustainable Food Systems (CASFS). I had the good fortune to work with **Patri-**

cia Allen, CASFS director, at a fall meeting of Academic Leaders in Sustainable Agriculture in New Hampshire. I believe that UC Davis and UC Santa Cruz have important, distinct, and complementary roles in research, education and public service on sustainable food systems. There are some overlaps in our respective missions, which are a good basis for our broader relationship, but I see a great benefit in continuing to play to our respective strengths, while collaborating on areas of common interest. I strongly believe maintaining a diversity of views and approaches to these challenging issues is an important institutional resource for California and for the nation.

As we work with CASFS and other partners across the state to develop new initiatives, we are committed to maintaining a balanced approach to production, economic, environmental and social issues. Some of our greatest academic and practical challenges are in the area of social issues—seeking greater equity and social justice in our food system. UC Santa Cruz, specifically CASFS, is widely recognized as the state's (and arguably the nation's) leader in research on the social science aspects of food system sustainability. I rely on UC Santa Cruz as a source of path-breaking, critical research that challenges us to break new ground, and can help us frame a forward-looking agenda.

I am a great fan of CASFS's Student Farm, and am delighted to see growing collaboration between it and the UC Davis Student Farm. I also have the highest respect for UC Santa Cruz's leadership in experiential education in sustainable agriculture, which has produced multiple benefits to our programs as a source of inspiration and of excellent students, and extraordinary initiatives founded and led by UC Santa Cruz alumni. I am very appreciative for past and ongoing participation by CASFS in SAREP activities, and I am optimistic about prospects to increase funding for grants in areas of mutual interest.

Partnering with valued stakeholders, along with being creative, inclusive, and maintaining our integrity, is among ASI's core values. Taking partnership seriously and putting it into practice means we need to engage with many diverse groups, ranging from farmers and farm laborers to community activists, environmentalists, processors, and policymakers, to name but a few. Fortunately, I find those interactions among the most stimulating and rewarding parts of my job.

—Tom Tomich, director, UC Davis Agricultural Sustainability Institute, and director, University of California Sustainable Agriculture Research and Education Program.

Niche meat marketing conference will feature “grass-finishing” expert

Continued consumer and producer interest in grass-fed beef and pastured poultry are the reasons behind the sixth annual University of California Niche Meat Marketing Conference March 26-27, according to **Roger Ingram**, a UC livestock and natural resources advisor in Placer and Nevada counties.

“So far, the downturn in the economy hasn’t affected the demand for grass-fed beef and pastured poultry,” said Ingram, the conference organizer. This year’s conference is at the Stanislaus County Agricultural Center in Modesto.

The conference will feature, **Jim Gerrish**, a grass-finishing expert at the University of Missouri, whose beef-forage systems research is the basis of management-intensive grazing.

In addition to Gerrish’s keynote speech and presentations on grass-finishing, the

conference will feature pastured beef, poultry, sheep and meat goat producer panels; workshops on meat-goat cost studies; buyers clubs; the basics of niche marketing; a consumer, buyer and distributor panel; and a marketing study on grass-fed and natural label changes.

The conference is a full day March 26 and a half-day March 27. The cost is \$90 per person or \$60 for one day. For pre-registration or more information, contact Roger Ingram, UC Cooperative Extension Placer County, DeWitt Center, 11477 E Ave, Auburn, CA 95603, (530) 889-7385 or rsingram@ucdavis.edu. The conference registration form is at http://ceplacer.ucdavis.edu/Livestock/2008_Meat_Niche_Marketing_Conference.htm.

UC livestock advisor **Glenn Nader** and researchers from California State University, Chico investigated the market potential for



photo by Dan Macon

grass-fed beef in a project funded by UC SAREP in 1996. Their report, “Natural Beef: Consumer Acceptability, Market Development and Economics,” is at <http://www.sarep.ucdavis.edu/Grants/Reports/nader/>. It includes information on preparing business and marketing plans.

SOURCES OF FUNDING

Organic Research grants

The Organic Farming Research Foundation offers research and education grants of up to \$15,000 per year for general grants and invites applicants to apply in its twice-yearly funding cycle. A new partnership between OFRF and Stretch Island Fruit Company is making special funding available to support grants focused on organic fruit—up to \$20,000 per grant per year. Please see the OFRF Web site for complete details on the types of grants funded at ofrf.org. OFRF organic research specialist **Jane Sooby** is available to work with farmers and others interested in doing on-farm research and

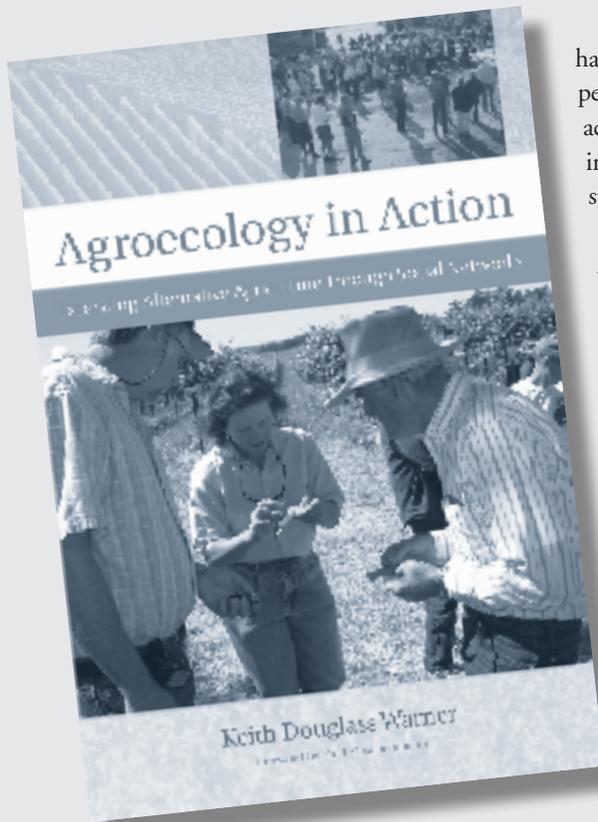
applying for grants. The foundation’s on-farm research guide gives an overview of the research process and is accessible through OFRF’s Web site under “research program,” or can be ordered free of charge by calling OFRF at (831) 426-6606. The deadlines for proposal consideration are July 15 for the fall funding cycle and Dec. 15 for the spring funding cycle. Contact Sooby at OFRF, PO Box 440, Santa Cruz, CA 95061 or email research@ofrf.org or jane@ofrf.org.

International funding database

Community of Science (COS) Funding Opportunities is a comprehensive international database of published grants, scholarships, fellowships and awards with more than 23,000 entries that have been reviewed, compiled, and formatted in a searchable database. Other services available are COS Expertise, a worldwide database of profiles of researchers, scholars and other experts, and COS Abstract Management System, a comprehensive Web-based system for managing the submission, review and approval of abstracts. For more information see www.cos.com.

Agroecology in Action: Extending Alternative Agriculture Through Social Networks

by Keith Douglass Warner. MIT Press, 304 pages, 2007.



As I started my dissertation research, I observed that many theories have evolved about sustainable agriculture, but few studies explain how people (farmers, farm advisors, scientists) had actually put these ideas into action. More than 80 definitions of sustainable agriculture could be found in scientific publications, but I found myself more interested in understanding how people translated the ideas into action.

My study, which was published in 2007 by MIT Press, shows that many people are assembling different configurations of social networks, based on their understanding of sustainable agriculture, and that these are having a profound effect on American farming. I wrote this book to help theoreticians and practitioners better understand that alternative agriculture requires an alternative extension process: social learning.

I love California's environment and I love California agriculture. As I rambled around our state's rural landscape, I discovered that many people working in agriculture do, too, while at the same time, most *urban* Californians are removed from farming. This prompted me to show how farming is evolving to become more environmentally conscious. I discovered that thousands of people were working to make incremental, affordable improvements in stewardship, but these were largely invisible to the public. The environmental problems of modern agriculture get newspaper headlines. I wanted my study to take on the "big picture" question of the evolution of these "thought and practice" issues, something that is not generally reported in popular media or scientific journal articles.

My first idea for a dissertation centered on agricultural policy questions, but I soon discovered that extension strategies in sustainable agriculture were more critical, and begged for social science analysis. How do growers or consultants learn what they need to know? Why have some UC Cooperative Extension advisors and commodity groups worked intensively with grower networks to foster sustainable agriculture innovation? What extension strategies have they developed? When I read **Sean Swezey** and **Jenny Broome's** (former SAREP director and associate director) article in *California Agriculture* in 2000¹ about the agricultural partnership model, I realized that there were many initiatives taking place in the agricultural community with many crops that represented a "quiet revolution." I set out to document them and to look for emergent patterns that could inform further efforts.

My initial work suggested that the "partnership model" depended on grower participation and cooperative learning in networks, and these features distinguish it from "technology trans-

¹ Swezey, S., Broome, J.C., 2000. Growth Predicted in Biologically Integrated and Organic Farming Systems in California. *California Agriculture* 54 (4), 26-35.

fer.” The UC Biologically Integrated Farming Systems (BIFS) Workgroup was generous in funding a portion of my study specifically investigating the role of grower participation. I used a network analysis methodology because it allowed me to look at how clusters of people were coordinating their participatory learning efforts. Over a three-year period, I conducted over 150 interviews and 13 focus groups with 84 participants. I attended more than 34 field days and agricultural partnership meetings, and reviewed over 200 reports and articles.

MIT Press agreed to publish my dissertation study in its new series *Food, Health and the Environment*, after I revised it to address national farming issues. I was able to weave in cases from four other states that make it clear the sustainable agriculture partnership model is working elsewhere as well.

Each chapter opens with a narrative of how farmers, consultants, extension agents, scientists, growers groups and environmental agency officials collaboratively learned about how to make ecological principles practical in farming—in other words, useful for pollution prevention and sustaining rural livelihoods. I show the critical importance of “social learning” to foster innovation. Many great ideas for preventing pollution in agriculture exist on paper. My book explains how these networks realized their potential. The balance of each chapter provides social science analysis of how these networks negotiate the challenges of putting these ideas into action.

I wrote the book so that it would appeal to multiple audiences. General readers can

engage the big issues by reading the opening narratives. Anyone interested in assembling a network for environmental resource protection will benefit from a close reading of the more formal social science analysis, which constitutes the balance of each chapter. My study suggests that pollution prevention has taken place in general proportion to the resources and effort invested in the development of integrated farming systems. This begs the question: What would happen if the same research, innovation and collaborative extension efforts were expended on all crops?

The book concludes with a call to public mobilization. The public wants more sustainable agriculture. Many producers and scientists do as well. Agricultural policymakers and research directors are the critical missing links. This book shows how agriculture could be an even better steward of the environment, with more investment in these new forms of research and innovation.

I would like to thank the hundreds of people who helped me with this study, but especially the past and present staff of SAREP and the UC BIFS Workgroup. These are the people making the difference; all I did was tell their story.

Keith Douglass Warner is a Franciscan Friar, lecturer and researcher at Santa Clara University. Information on his book, journal articles and dissertation methodology are available at his Web site www.scu.edu/fevp.

Birds, bats, owls, vineyards

Songbird, Bat, and Owl Boxes: Vineyard Management with an Eye toward Wildlife, by **Emily Heaton, Rachael Long, Chuck Ingels, Tom Hoffman**, authors. **William Tietje**, technical coordinator/editor. The new guide explores the benefits of the biodiversity and aesthetics of songbirds, bats, and owls and suggests “win-win” situations for the environment and for grape growers. It includes methods for integrating next boxes with vineyard management, biology and habitat requirements, details on construction and maintenance, literature sources, and online resources. While written with grape growers and vineyard managers in mind, anyone interested in learning about nest boxes will find this guide useful. Available from UC ANR Publications. Publication 21636, \$15. See <http://anrcatalog.ucdavis.edu/Grapes-GrapeProducts/21636.aspx>, or call (800) 994-8849.

Free ‘food miles’ publication

Food Miles: Background and Marketing, by **Mary Hendrickson, Bill McKelvey and Joe Parcell**, University of Missouri. 12 pages.

ATTRA, the National Sustainable Agriculture Information Service, has a new publication, *Food Miles: Background and Marketing*. This 12 page publication provides a background on energy use in agriculture with specific reference to food transport. It addresses how food miles are calculated, investigates how food miles affect producers and consumers, and evaluates methods for curbing the energy intensiveness of our food transportation system. This publication can be downloaded at: <http://attra.ncat.org/attra-pub/PDF/foodmiles.pdf>. Or, for a free copy, call (800)346-9140.

ASI strategic plan: stakeholder input

Coming soon...a web-based tool to gather stakeholder input on UC Davis Agricultural Sustainability Institute’s strategic planning. For the latest update, find us on the Web at:

www.asi.ucdavis.edu



CALENDAR

* SAREP WEB CALENDAR AND ONLINE COURSE

SAREP offers a regularly updated sustainable agriculture calendar on our World Wide Web site at: www.sarep.ucdavis.edu (click "Calendar" on top menu bar). Please feel free to add sustainable agriculture events. In addition, we offer an online course for pest control advisors and others titled *Ecological Pest Management*. Up to 11 CE credits for California PCAs. See www.sarep.ucdavis.edu/courses/

* NATIONAL/INTERNATIONAL CALENDAR

The National Agricultural Library maintains a calendar as part of AgNIC at www.agnic.org. It links to more than 1,200 major national and international agricultural conferences.

MARCH

25 – 27 20th Anniversary: SARE 2008 National Conference, Kansas City, MO. Focus: forging an agriculture that is profitable, environmentally sound, & good for people & communities. 20 years of advancing a more sustainable agriculture through nationwide competitive grants program, & staying in touch with needs of farmers/ranchers through North Central, Northeast, Southern & Western regional programs. Information at sare.org/2008conference.

26 – 27 Niche Meat Marketing Conference, Stanislaus County Agricultural Center, Modesto. Sponsored by UC Cooperative Exten. More info: http://ceplacur.ucdavis.edu/Livestock/2008_Meat_Niche_Marketing_Conference.htm. Or contact Roger Ingram, UC Cooperative Ext., Placer County, DeWitt Center, 11477 'E' Ave., Auburn, CA 95603; (530) 889-7385.

APRIL

17 Organic Workshop: Crops--Organic System Plan, Placerville, CA. Sponsor: Calif. Certified Organic Farmers Foundation (CCOF). 1:30 to 4:30 p.m. Information: See *Going Organic events* at ccof.org/goingorganic.php, or contact Fred Thomas at fred@ccof.org or (530) 891-6958.

24 Organic Workshop: Crops--Organic System Plan, Lakeport, CA. Sponsor: Calif. Certified Organic Farmers Foundation (CCOF). 1:30 to 4:30 p.m. Information: See *Going Organic events* at ccof.org/goingorganic.php, or contact Fred Thomas at fred@ccof.org or (530) 891-6958.

MAY

13 Organic Workshop: Crops--Organic System Plan, Napa, CA. Sponsor: Calif. Certified Organic Farmers Foundation (CCOF). 1:30 to 4:30 p.m. Information: See *Going Organic events* at ccof.org/goingorganic.php, or contact Fred Thomas at fred@ccof.org or (530) 891-6958.

SEPTEMBER

14 – 18 Biodiversity in Agriculture: Domestication, Evolution, and Sustainability, UC Davis. Three themes: Crop & animal domestication scenarios on Monday (15 Sept.); Processes of agricultural evolution on Tuesday (16 Sept.); & Agricultural biodiversity & sustainability: the global implications of California agriculture on Wednesday (17 Sept.) Symposium banquet set Tuesday, 16 September. Post-Symposium tours on Thursday (18 September). Information: see <http://harlanii.ucdavis.edu/index.htm>

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Tom Tomich

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