**Fall 1999- Vol. 11, No. 3**

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From the Director

SAREP Collaborates on Regional Conference

In my role as SAREP director, I am committed to fostering partnerships with regional and federal programs to expand the adoption of sustainable agriculture practices.

As co-chair of an upcoming regional conference sponsored by the USDA Western Region Sustainable Agriculture Research and Education (Western SARE) program, I would like to take this opportunity to invite you to a major event on March 7-9, 2000. The Portland, Oregon event, Farming and Ranching for Profit, Stewardship and Community, will showcase and celebrate the outcomes of the past 12 years of Western SARE’s producer-oriented, on-farm research and education efforts, and provide an opportunity for colleagues from across the most diverse production region in the United States to meet and exchange information, experience and inspiration. Farmers and ranchers and community-based organizations will join with researchers to present practical, on-farm experience and research-based information derived from Western SARE-funded and other collaborations from the Pacific Islands, the arid Southwest, California, the Pacific Northwest, and the inter-mountain range and croplands of the Rocky Mountains. Community food systems analysis, marketing and policy issues will also be featured at the conference.

Several SAREP staff members have been instrumental in organizing panel presentations and discussion sessions which reflect the common sponsorship of sustainable agriculture research projects in California by both UC SAREP and Western SARE. Associate Director Jenny Broome will moderate discussions of sustainable grape production practices and results of several new Biologically Integrated Farming Systems (BIFS) projects in California. Gail Feenstra, SAREP community food systems analyst, will moderate panel discussions on direct marketing methods and sustainable community food systems.

I will lead a panel presentation and discussion on sustainable tree crop systems, emphasizing biological efficiency in pest management derived from researcher-farmer partnerships in the reduced risk, transitional, and organic production of apples and stone fruit. Numerous other invited researchers and panelists from UC SAREP- and Western SARE-sponsored projects in California will be featured, including farmers and researchers from the Sustainable Agriculture Farming Systems (SAFS) project and Biologically Integrated Orchard Systems (BIOS) projects.

As incoming chair of the Western Coordinating Committee for Sustainable Agriculture (WCC), a regional land grant effort, I am leading the effort to
prepare a conference proceedings that will showcase the knowledge and successful models highlighted at this regional event. I look forward to seeing you at this millennium conference, which will bring together some of the most diverse and active producers, researchers, educators and advocates in the sustainable agriculture community.

In this harvest season, it is important to mention the outstanding efforts that have been made by particular SAREP staff members, not only for their work on SARE 2000, but in other important areas. I am pleased to announce the appointment of Jenny Broome to the position of SAREP associate director (see Broome New SAREP Associate Director). Jenny brings experience and vision to this visible and highly demanding position, and has represented the program well in her previous role as coordinator of both the BIFS and methyl bromide alternatives competitive grants programs at SAREP. I welcome her to this position, and am certain her service to SAREP will strengthen our mission-based leadership in sustainable agriculture research and education.

I am also pleased to announce the appointment of SAREP’s Gail Feenstra as the USDA’s California Community Food Security co-liaison. Gail, who continues as food systems analyst at SAREP, was appointed by USDA Secretary Dan Glickman (see USDA Ag Secretary Names Feenstra). Her appointment reflects the importance that SAREP and Cooperative Extension place on the links between sustainable urban and regional agriculture to consumers in order to increase food access and security. I am confident that she will represent the food security research and education goals of the University of California and SAREP in an outstanding professional manner in this important partnership with USDA. —Sean L. Swezey, director, University of California Sustainable Agriculture Research and Education Program.
Jenny Broome New SAREP Associate Director

SAREP director and CE specialist Sean L. Swezey announced that Janet C. “Jenny” Broome was appointed associate director at SAREP on July 1.

“We’re very excited to have someone of Jenny’s administrative, research and educational experience to provide additional leadership for SAREP, especially as we develop a more visible statewide presence,” Swezey said.

Broome, a plant pathologist, has worked at SAREP since July 1997 dividing her time between coordinating the Biologically Integrated Farming Systems (BIFS) program, and developing and extending sustainable pest management practices and systems. As BIFS coordinator, she has worked to create a competitive grants program for on-farm demonstrations of biologically integrated farming systems and document reduced reliance on agricultural chemicals in these systems. Currently, there are six active BIFS projects throughout the state in rice, prunes, walnuts, citrus, strawberries, and dairy/forage.

Broome was instrumental in developing the SAREP methyl bromide alternatives grants program. Through this program SAREP has provided nearly $900,000 to six projects that develop alternatives to the agricultural chemical, which is about to be phased out under the Montreal Protocol and the US Clean Air Act.

“As a UC Davis plant pathologist, Broome is highly qualified to lead SAREP in this important effort,” Swezey said.

As a research scientist, Broome has developed plant disease risk models currently being used in grapes and strawberries in California, Europe, and South America. She continues to lead the development of a disease model database in collaboration with the Statewide Integrated Pest Management Project. This database improves grower, pest control adviser, and researcher access to weather-driven models that can be used to time disease control tactics and have been shown to reduce the use of pesticides (for more information see the Pestcast website at http://www.ipm.ucdavis.edu/DISEASE/).

Current projects this year include the development of a resource guide for growers that will describe the environmental regulations at the federal, state, and county level that exist to guide vineyard development (see Coming: Environmental Regulations and Vineyard Development). Broome and other members of the California Grape Advisory Team are developing three crop-pest profiles of the current pest management system for California wine, raisin, and table grapes and evaluating how the implementation of the Food Quality Protection Act (FQPA) of 1996 may affect these commodities. The
profiles will also outline a FQPA transition strategy for all three commodities, highlighting areas lacking alternatives and needing research, as well as areas where alternatives exist and more on-farm demonstrations would increase adoption.

She is author of several peer-reviewed articles and many trade and extension publications in plant pathology and in sustainable viticulture. Most recently she was the principal editor of the 1999 SAREP publication Exploring Eco Labeling for Winegrapes: A Working Conference (see New Winegrape ‘Eco Labeling’ Publication Available). In addition, as a UC member of the Central Coast Vineyard Team, a sustainable viticulture initiative on the Central Coast, she helped develop the team’s Positive Points System (PPS). This document outlines an ideal integrated farming system that includes sustainable soil, pest, water, vine, wine and educational practices for Central Coast grape growers. Through a series of questions, the PPS gives a grower the highest ratings for those practices that enhance environmental and human health while enabling viable grape growing and quality wine making. For more information on the PPS and the Central Coast Vineyard Team see http://www.vineyardteam.org/index.htm and California Vineyard Team Wins National Recognition.

Broome came to SAREP from the California Environmental Protection Agency’s Department of Pesticide Regulation, where she was an environmental research scientist in the Environmental Monitoring and Pest Management Branch. She has a Ph.D. and a M.S. in plant pathology from UC Davis, and an undergraduate degree in biology from Swarthmore College.
USDA Ag Secretary Names SAREP’s Feenstra Community Food Security Co-Liaison for California

USDA Agriculture Secretary Dan Glickman has named Gail Feenstra, food systems analyst at SAREP, the California Community Food Security co-liaison. Feenstra, a nutrition and food systems expert, will be the point of contact and resource coordinator for all community food security and anti-hunger activities within the state. Jerome Jeffries of the USDA Farm Service Agency’s Davis office is the co-liaison. Feenstra leads SAREP’s research and education efforts on Community Food Systems.

“Our community food security liaisons will play a critical role in supporting local and community-based efforts in fighting hunger,” Glickman said. “Gail Feenstra will bring dedication and commitment to this new role, and I look forward to working with her to help achieve our food security goals in California communities.”

The goal of USDA’s Community Food Security Initiative—launched by Glickman earlier this year—is to create and expand grass-roots partnerships that build local food systems and reduce hunger. USDA is joining with states, municipalities, nonprofit groups, and the private sector to strengthen local food systems by replicating best practices of existing efforts and by catalyzing new community commitments to fight hunger.

Feenstra was nominated for the position by UC Division of Agriculture and Natural Resources Associate Vice President/Cooperative Extension Associate Director Henry Vaux. Feenstra will continue her SAREP work in addition to her new duties.

At SAREP, Feenstra is also a major collaborator on two large-scale USDA Fund for Rural America projects that link sustainable agriculture with rural community development. She is part of a project which brings together the expertise of UC researchers, the Davis-based Community Alliance with Family Farmers and the Lodi-Woodbridge Winegrape Commission to increase adoption of sustainable agriculture practices and build farmer leadership skills to strengthen connections in local communities. She is also leading the California component of a nationwide project with Cornell and Iowa State University researchers which is demonstrating the role of farmers’ markets nationwide in rural development, entrepreneurship and job creation.

Feenstra’s work has resulted in publications to help community-based groups achieve food security including Local Food Systems and Sustainable Communities; Entrepreneurial Community Gardens: Growing Food, Skills, Jobs and Communities, co-authored with UC Davis researchers Sharyl McGrew and David Campbell; Growing a Community Food System, co-
authored with Steven Garrett of Washington State University; and Community Food Systems in California: Profiles of 13 Collaborations, co-edited with Campbell.

“Disappearing farmland and increasing poverty affect food access for many people,” says Feenstra. “We are identifying strategies to expand community gardens and exploring ways to increase food access through regional agriculture. Research we’ve done shows that better links to area farmers and community gardening projects improve the quality and kind of food available to consumers.”

Feenstra has worked at SAREP since 1989. She has a doctorate in nutrition education from Columbia University and a bachelor of science in dietetics from UC Davis.
Vineyard Team Wins National Award

Renew America’s National Awards Council for Environmental Sustainability recognized the Central Coast Vineyard Team (CCVT) for its commitment to environmental sustainability. CCVT was one of four finalists in a competitive national search for sustainable organizations. CCVT will be placed in the Environmental Success Index (www.crest.org/renew_america) which chronicles more than 1,400 effective environmental programs nationwide that measurably protect, restore or enhance the environment. Programs in the Index meet tough standards for program effectiveness, natural resource conservation, economic progress and human development.

Jenny Broome, SAREP associate director and researcher of alternative disease management strategies, has worked with the Team from its inception.

“I feel privileged to be a part of this grower-led initiative for increasing the long-term sustainability of grape growing on the Central Coast,” she said. “The Team takes very seriously the role growers can play in being stewards and protectors of the human and natural resources in a community.”

CCVT represents a broad-based community partnership of winegrape growers, wineries, consultants, farm advisors, environmental interests, and government representatives whose mission is to promote environmentally sustainable vineyard practices on the Central Coast. Team members are involved with more than 30,000 acres in the three-county region and have been collaborating on several outreach and education projects for more than three years.

Most notable, CCVT developed the Positive Points System (PPS)—a method for evaluating the extent of sustainable farm practices used in vineyards. This protocol was developed to both educate and guide growers toward more sustainable practices. Over the last three years, more than 50 growers have participated in the evaluations and more than 10,000 acres have been specifically evaluated using the PPS. Each year, participation in the PPS and the Team’s activities has increased. In addition, CCVT uses a “grower-to-grower” approach to highlight specific sustainable practices through field meetings, grower testimonials, and demonstrations at template farms.

For more information about CCVT and its Positive Points System, call (805) 462-9431 or visit its Web site at http://www.vineyardteam.org.
Project Update:

Controlled Grazing on Foothill Rangelands

by Lyra Halprin and David Chaney, SAREP

UC livestock advisor Roger Ingram (Placer/Nevada counties) and David Pratt (formerly UC livestock advisor in Napa/Solano counties) have devoted their careers to helping livestock ranchers increase their economic returns and manage rangeland resources in more sustainable ways. As part of a larger research and education effort undertaken by this team, SAREP funded a three-year project (1995-98) investigating management-intensive grazing and spring calving in cow/calf operations on California’s annual rangeland. This could potentially allow ranchers to increase the number of animals per acre, reduce production costs by eliminating the need for feeding hay, increase forage cover, reduce herbicide use, and improve water quality without expensive capital improvements or destocking the range.

The project, Controlled Grazing on Foothill Rangelands, addressed the expressed needs of northern California livestock producers for research-based information on controlled grazing and sustainable livestock production practices. Through the development of a 250-acre watershed site at the Sierra Foothill Research and Extension Center, the project demonstrated and documented the effects of the application of controlled grazing principles on the foothill rangeland/annual grassland and hillside irrigated pastures of the project area. It also demonstrated how land owners and ranchers can monitor the effects of these practices so they can decide for themselves whether controlled grazing is appropriate for their businesses. The project also addressed public concerns about the environmental impact of grazing.

Project Design

The site was subdivided into 22 rangeland and two irrigated pasture paddocks. They were fenced, supplied with water, and stocked with 20 cows and heifers during the two years of the project spring calving occurred. Research projects at the site examined the effects of controlled grazing on the environment, livestock performance and profitability, and analyzed the potential of spring calving on annual rangeland. The same site was used for a demonstration project on low-stress livestock handling, and for a project to demonstrate appropriate tools and equipment for pasture management and livestock control. Educational projects included the Grazing Academy, which emphasized the practical application of controlled grazing principles and demonstrated fencing and water innovations.

Ingram and Pratt’s research data show that it is possible, and may be more profitable, to eliminate hay feeding from a year ‘round cow/calf operation on California’s annual rangeland. To eliminate hay feeding, however, ranches must be restructured so the cow’s production cycle matches the forage cycle.
The researchers note that more information is needed before they can actually recommend the management methods used in their study.

“North American livestock producers are the most productive in the world,” said Pratt. “Unfortunately, we are also the least profitable.” He noted that profits are a consequence of production and costs.

“Nutrition has the biggest impact on production. What we’re suggesting is a new way to supplement livestock, which has implications beyond feeding. They are concepts that may be breakthroughs to improved profits for many livestock producers,” he said.

Pratt and Ingram incorporated the research of ranching consultant Stan Parsons and ruminant nutritionist Dick Diven in their work. The farm advisors learned how to evaluate the amount of fat on the animals they grazed (Body Condition Score, or BCS) and how to adjust the stocking rate (the amount of forage required by their herd) to match the carrying capacity (the grass available). BCS scores range from 1 (emaciated) to 9 (obese).

One of the ways identified to help producers get their livestock in synch with available resources is to help cows move from fall to spring calving, so that the animals can take advantage of the richest natural forage.

**Findings**

The following were the major findings during the three-year life of the project:

1) Cows can be bred during the heat of the summer. The project had 100 percent conception rates on cows during the two years they calved in the spring (1998 and 1999, breeding in July).

2) The calving interval between spring calving cows of 1998 and 1999 was 357 days. (The usual average is more than one year.) Calving season (when calves are born) lasted 42 days in 1998 and 19 days in 1999. The shorter the calving season, the more uniform the calves and the easier the management. Calving seasons were short because cows were in adequate body condition with BCS at 7.9 in 1998 and 6.6 in 1999. The single most important indicator for a cow is adequate body condition at calving which shortens the postpartum period and increases the potential success of getting cows re-bred quickly.

3) Heifers (young breeding female under age three) had an 80 percent conception rate and calved at BCS 4.7. The combined demands of growth, gestation, and lactation typically make it challenging to get heifers in adequate body condition.

4) Fall calving cows were used in the project’s first year; the transition was then made to spring calvers. Comparing the calf weights of fall- and spring-born calves at similar ages revealed a 53-pound advantage for six-month-old fall calves. By 11 months of age, there was no difference. This suggests the need for a stocker phase (an intermediary stage after weaning and before entering the feedlot) for spring-born calves.

5) Keeping cows and calves together for as long as possible improved weight
gain on the calves. Calves weaned at six months of age were 30 pounds lighter at selling than calves weaned at nine months of age. Body condition was the indicator for weaning. Cows with calves were weaned when cows reached a BCS 5; they must be weaned one to two months before they calve again, even if their body condition is adequate.

6) Cows were weighed and body condition scored on a monthly basis. It is possible for cows to use their body condition (stored fat) as an energy source during times when feed quantity is low, as long as an adequate feed period occurs prior to calving to allow them to gain back the condition they lost.

7) Forage samples were taken on a monthly basis for 36 months. Two mineral supplements were formulated based on the results: one for the green season and one for the dry season. The dry season supplement contained urea to make up for forage protein deficiencies in late summer and fall. The mix was primarily salt with trace minerals and urea, and was fed in a loose form.

8) Crude protein reached a peak of over 20 percent in late winter and declined to less than six percent by August. This continued to decline to less than four percent in October.

9) Forage energy (mega-calories) levels peaked in February/March and declined 40 percent by mid-summer.

10) The projected gross margin per cow for calves born in 1999 was $214 or $18.82 per acre.

11) No mastitis or other udder problems were encountered. Calves did not have pneumonia. Eye problems were typical for the area; most were caused by seedheads penetrating the eye.

“It is important to point out that project data is based on two years of spring calving,” Ingram said. “We have shown it is possible to spring calve. Several of the findings suggest some definite positive trends, however, they are nothing more than trends. More results are needed over more years. We don’t want to suggest everyone will be able to get a 100 percent conception rate or a 19-day calving season if they make the transition to spring calving.”

According to Ingram and Pratt, other questions that could be answered with more research include:

• What is a better definition of “spring”? This project started calving April 1. Is it possible to calve earlier or should it be later?

• What should the body condition be at calving? Is it a 6 or 7 BCS or some other condition score?

• How far can producers let a cow’s body condition drop and still be in adequate condition at calving? Is it possible to go down two BCS scores, one and half scores or some other figure?

• What needs to be done to heifers to improve conception rates? In the project, they were bred at BCS 6 and still only generated an 80 percent conception rate.
What happens if producers spring calve and do not use management-intensive grazing principles to ration dry feed until forage growth starts again? Would similar results be achieved or would hay or some other energy source be required? No hay was fed during this project.

“It would be helpful to do this work on a larger scale over more years,” Ingram said. “I’d like to see a minimum of 100 cows on 1,000 acres over five years.”

Ingram and Pratt coordinated active educational programs for producers at the site. The annual Grazing Academy, presented over the last eight years (supported by SAREP for seven years), attracted more than 350 ranchers and livestock professionals who own, manage, or consult on almost one million acres in the western United States. Five project field days also received support. The project also received partial funding from USDA’s Western Sustainable Agriculture Research and Education (SARE) program.

**Products**

Pratt is now chief operating officer for Ranching for Profit Schools, based in Fairfield, Calif. Ingram continues in his role as farm advisor for Placer/Nevada counties. They have produced free project information including an overview and booklets on animals, fencing and water, and land. Also available is the California Grazing Academy Audio Tape Series, which is intended to provide follow-up support to Grazing Academy alumni and to introduce all ranchers to the principles and practices of controlled grazing. The tapes were developed by Ingram and Pratt and UC Farm Advisor (Glenn County) Barbara Reed. Technical assistance and narration was provided by Robert Singleton, UC DANR Communication Services broadcast information representative. Cost for the tape series is $25 (includes shipping and tax). The tape series is supported by a grant from the Renewable Resources Extension Act. For tapes or booklets contact Ingram at UCCE, 11477 E Avenue, Bldg. 306, DeWitt Center, Auburn, CA 95603; (530) 889-7385; Fax: (530) 889-7397; Email: rsingram@ucdavis.edu. Contact Pratt at (707) 429-2292; Email: pratt@ranchmanagement.com. A project Web site (http://www.foothill.net/~ringram) includes almost 50 articles on grazing, ecology, nutrition, fencing and low-stress livestock handling and links to related Web sites.
Staff Project Update:

Conserving and Restoring Pollinator Populations on Farms

by Claire Kremen, Center for Conservation Biology, Stanford and Robert L. Bugg, SAREP

Organic farms depend on biodiversity for many functions including soil fertility maintenance, control of pest organisms, and pollination. Previous research on biodiversity in agriculture has mainly been concerned with biological control and soil fertility, but pollination has received little attention. Without pollinators some fruit, vegetable, and seed crops might yield less or fail altogether. Scientists have predicted serious declines in managed and wild colonies of the honey bee (Apis mellifera, introduced from Eurasia), as well as in populations of other pollinating insects, including native species of bees (e.g., bumble bees, carpenter bees, leaf cutting bees, sweat bees). Such declines could have ecological and economic consequences. In addition to a decline in crop yields, loss of pollinators could result in loss of native plant species, with cascading effects throughout the ecosystem. Despite their importance, little is known about wild pollinator populations or the consequences of their decline.

This research addresses whether wildlands contribute insects that pollinate vegetable crops and the value of such “pollination services.” Since habitat loss and fragmentation are the suspected causes of a reduction in pollinator populations, this information could then be used as an argument for conserving wildlands and restoring native plants on field borders.

It was challenging to find plants that relied entirely on insect pollination and were likely to benefit from a diversity of native pollinators. Crops selected for our first field season included tomato, eggplant, peppers, melons, and cucumbers. We added strawberries, because their flowering unexpectedly extended into mid-June 1999, when our study began.

After many field visits, we settled on 20 farms and six wildlands sites (representing a total of 37 study sites when multiple parcels were included). These sites included both organic and conventional farms across a gradient of proximity to native vegetation and other natural habitats. The study is a true landscape-scale experiment, relying heavily on Geographic Information Systems (GIS) technology to map not only the crops, but also various wild nectar and pollen sources that may support native pollinators. Using aerial photos provided by the California Department of Water Resources, we can assess the aerial extent of different habitat types (riparian, chaparral, or oak woodland) in the vicinity of farms.

Simply visiting a flower does not constitute pollination. So far, we have
observed heavy visitation by several species of native bees to flowers of strawberries, watermelon, muskmelons, eggplant, and cucumber. At times, visits by native bees exceeded those by honey bees, even on farms with managed hives. Surprisingly, native bees were found on all the farms studied, regardless of management type (organic or conventional) or the proximity to wildlands. Our detailed studies have shown that native bees not only visit, but definitely pollinate watermelon.

Although native bees are found on all farms, we do not yet know whether abundance or diversity varies among sites, nor the influence of various environmental factors. We will statistically test these influences, assessing the relative importance of on-farm plant diversity (including crops, weeds, and other plantings) versus diversity and types of habitats surrounding the farms as predictors of pollinator diversity and abundance. In the next two years we will further refine and apply our methods and remain alert to new opportunities.

Funding for this project was provided by the National Fish and Wildlife Foundation, Mead Foundation, The Nature Conservancy, The Organic Farming Research Foundation, the Stanford University Field Studies Internship Program, and the Wildlife Conservation Society. Special thanks to Robbin Thorp, professor emeritus, UC Davis entomology department and noted expert in bee systematics and ecology, for invaluable assistance in defining the scope and focus of the project, and identifying the bees from among the dazzling array of flower visitors.

For more information contact Claire Kremen, Center for Conservation Biology, Stanford University, ckremen@leland.Stanford.edu or Robert L. Bugg, SAREP, University of California, Davis, rlbugg@ucdavis.edu.
SAREP Farmers’ Market Study Featured in California Agriculture

*California Agriculture*, the University of California’s peer-reviewed scientific agriculture journal, will feature an article about a farmers’ market study conducted by SAREP’s **Gail Feenstra** and **Chris Lewis**. In order to better understand the range of opportunities and benefits the growing number of farmers’ markets provide to their vendors and host communities, Feenstra and Lewis are conducting a three-part study focusing on the entrepreneurial development functions of certified farmers’ markets. An article about their work is part of the special November/December 1999 issue of the magazine saluting the UC’s Small Farm Program on its 20th anniversary. There is no charge for current issues of the magazine; to obtain a copy contact California Agriculture, UC DANR, 1111 Franklin St., 6th Floor, Oakland, CA 94607-2500 or call (510) 987-0044 or Email [calag@ucop.edu](mailto:calag@ucop.edu).
Ann Mayse Leaves SAREP

Longtime staff member Ann Mayse is leaving SAREP to begin a teaching career in Fresno, Calif. after ten years with the program. Her initial SAREP project was to interview innovative farmers and ranchers from throughout the state about the transition to sustainable agriculture. She combined the interviews with an extensive literature review and personal observations to produce the SAREP publication *Sustainable Farming Systems: A Guide to the Transition*, a book still highly useful to individuals beginning to make changes in their farming production systems.

After the book was finished, Mayse worked part-time for the California Energy Commission as a project evaluator and part-time for SAREP on a variety of projects. In 1994, she began working for SAREP’s education coordinator David Chaney on the USDA’s Sustainable Agriculture Research and Education (SARE) program’s Professional Development Program (PDP).

“Ann’s skills were invaluable to me in organizing and conducting three focus groups that set the direction for the program here in California,” Chaney said. She helped write proposals for three SARE-funded PDP projects and then worked for Chaney on the projects. The first two were educational resource binders on cover crops and soil quality. The third is the current pest control adviser education project.

We’ll miss Mayse’s dedication and the friendly tenacity she brought to her work. The school children of Fresno are lucky to have her.
FREP/SAREP Joint Conference

The California Department of Food and Agriculture’s (CDFA) Fertilizer Research and Education Program (FREP) has scheduled its seventh annual conference on November 30, 1999 in Modesto at the Doubletree Hotel. This year’s conference is being organized jointly by FREP and UC SAREP. Topics will focus on the relationship between nutrient management and soil and environmental quality.

“With our shared goals of environmental stewardship and farm profitability, SAREP and FREP have a history of cooperation on a variety of projects and initiatives. This conference takes the collaboration between the two programs to a new level,” says David Chaney, SAREP education coordinator. Chaney is co-chairing the event with FREP Director Casey Walsh Cady.

The conference will feature presentations and reports from projects funded through both programs. Conference highlights include a panel on Total Maximum Daily Loads (TMDLs), the latest trend in water quality regulation, and breakout sessions on nutrient management for orchard crops, organic matter management, integrated vineyard management, and managing nutrients through irrigation technologies.

FREP supports research and outreach projects to advance the environmentally safe and agronomically sound use of fertilizing materials in California. For more information or to request a copy of the conference program contact Debbie Scott at (916) 653-5340; Email: dscott@cfda.ca.gov. The full conference program is available on the FREP Web site: www.cdfa.ca.gov/inspection/frep/1999_conference.html.
SARE 2000 Conference in Portland

A major sustainable agriculture conference, *Farming and Ranching for Profit, Stewardship, and Community*, is scheduled in Portland, Ore. on March 7-9, 2000. Nationally known speakers, producers, researchers, agricultural extension agents and others from the Western U.S. and around the nation will share their sustainable agriculture successes, experiences and research results.

The event is sponsored by the USDA Western Sustainable Agriculture Research and Education (Western SARE) program, with contributions from several land-grant universities and the federal sustainable agriculture effort.

Confirmed keynote speakers include Virginia producer and author Joel Salatin, who will talk about how to increase farm and ranch profits through innovative livestock and ecological practices. Salatin, author of *Pastured Poultry Profits* and *Salad Bar Beef* will speak and conduct a workshop at the event. In addition, Oregonian Karla Chambers, co-owner and marketing director of Stahlbush Island Farms, will discuss changes in consumer demand for sustainably grown foods. Stahlbush Island Farms is a 2,000-acre vegetable and fruit production and processing operation that markets its frozen pureed foods worldwide.

The conference will highlight the methods and outcomes of diverse research and education projects funded by the SARE effort, including university-based, on-farm and producer-directed work. Innovative marketing strategies and examples will be shared, and the role of non-profit organizations and public policy in promoting sustainable agriculture will be discussed. The benefits of involving farmers and ranchers in agricultural research is another key element of the program.

A day-long tour will show attendees successful Portland-area farms, direct-marketing approaches, eco labeling successes, and youth and community efforts that relate to local agriculture. Issues about farming in the midst of urban sprawl and regulation will also be discussed.

For more information about the conference or to register, contact Gina Hashagen, Oregon State University, at hashageg@bcc.orst.edu or Tel: (541) 737-5477. Conference information is also on-line at http://wsare.usu.edu/2000.
Biointensive Conference Set in 2000

A UC Davis conference exploring the natural, human and global resources of the new century is scheduled March 27-29, 2000. *Soil, Food and People: A Biointensive Model for the New Century* is being presented by Ecology Action, the California-based global program for sustainable farming. Co-sponsors include UC Davis’s University Extension, UNICEF, the Wallace Institute for Alternative Agriculture, CARE International, the Columbia Foundation, the Clarence E. Heller Charitable Foundation, the Hearst Corporation, and chef and community food systems activist Alice Waters.

Speakers include John Jeavons, director of Ecology Action; William Lacy, vice provost for Outreach and International Programs at UC Davis; Louise Jackson, UC Davis vegetable crops; Jeff Mitchell, UC Kearney Agricultural Center; Ariena Van Bruggen, UC Davis plant pathology; Kate Clancy, Wallace Institute for Alternative Agriculture; Joan Dye Gussow, Teachers College, Columbia University; Raoul Robinson, United Nations Food and Agriculture Organization; Hope Shand, Rural Advancement Foundation International; Kent Whealy, Seed Savers Exchange; Leonard Diggs, Sonoma County organic farmer; Mas Masumoto, California farmer and writer; Marty Strange, Center for Rural Affairs, Nebraska; Peter Rosset, Food First/Institute for Food and Development Policy; Kate Scow, UC Davis soil microbiology; Juan Manuel Martinez Valdez, Ecology Action-Mexico/Latin America, and others.

A poster session is scheduled; the deadline is Jan. 14, 2000. For more information on conference registration contact University Extension, 1333 Research Park Dr., University of California, Davis, CA 95616-4852; Tel: (800) 752-0881; Fax: (530) 757-8558.
Pesticide Use Conference in 2000

In 1990 California became the first state to set up a full pesticide use reporting program for all non-animal agricultural applications, created and coordinated by the California Environmental Protection Agency’s Department of Pesticide Regulation (DPR).

Each year, more than two million use report records are submitted to the state’s 56 county agricultural commissioners and then transferred to DPR. Each record contains more than 30 separate pieces of information which DPR collects, analyzes, stores and distributes. Planning is underway for a pesticide use conference on May 8, 2000 to highlight the 10 years of experience with the reporting system. DPR is sponsoring the event; co-sponsors include the U.S. Environmental Protection Agency, UC SAREP, the California Department of Food and Agriculture and the U.S. Department of Food and Agriculture. The main goals of the conference will be to:

• Showcase the utility and value of pesticide use reporting;
• Share information among users of California’s pesticide use report;
• Promote a better understanding of pesticide use data;
• Discuss possible changes needed in current pesticide use reporting;
• Describe future directions for pesticide use reporting.

For more information on the conference, contact the California Department of Pesticide Regulation, 830 K St., Sacramento, CA 95814-3510; Tel: (916) 445-4300; Fax: (916) 324-1452; Web site: http://www.cdpr.ca.gov.
Technical review

Growing a Community Food System

Steven Garrett and Gail Feenstra

Community Ventures: Partnerships in Education and Research Circular Series. Western Regional Extension Publication in Cooperation with the U.S. Department of Agriculture. WREP0135. Washington State University. 1999

The last half of the twentieth century has marked dramatic trends in the food and agriculture system worldwide. According to this new Western Regional Extension Publication, the dominant trend has been toward increasing industrialization of the food system. As a consequence, according to the authors, farmers have seen the slow erosion of their share of the food dollar, rural communities are deteriorating socially and economically, and, despite a growing economy, many consumers struggle to feed their families healthy, nutritious meals. Most have little idea where their food comes from.

In the face of these trends, this publication describes a growing interest and participation in community-based food systems. Across the country, local projects are linking residents working together in different sectors of the food system to:

- improve access by all community members to an adequate, affordable, nutritious diet;
- support a stable base of family farms using sustainable production practices;
- use marketing and processing practices to link farmers and consumers directly;
- develop food and agriculture-related businesses and microenterprises to recirculate financial capital locally;
- improve working and living conditions for food and farm labor; and
- create food and agriculture policies to promote local, sustainable food production, processing and consumption.

Growing a Community Food System presents the practical steps communities interested in this alternative path need to take in order to be successful: build strong coalitions and plan strategically (visioning, community food system assessment, development of project concepts, evaluation). Once these foundations have been laid, communities are ready to launch their programs.

The first step, according to the publication, is to develop project resources (including funding) and establish an organizational infrastructure. The authors discuss various aspects of project implementation including education, entrepreneurism, policy and celebration. Finally, the publication addresses integrating evaluation into the project design.
The publication includes in-depth descriptions of two community food system project models—The Tahoma Food System in Pierce County, Wash. and PlacerGROWN in Placer County, Calif.—examples of two communities meeting the needs of their citizens. The authors conclude with a summary of the key lessons they have found helpful for community groups which have initiated and sustained these efforts.

To order *Growing a Community Food System* contact UC SAREP, (530) 752-7556, sarep@ucdavis.edu. Price: $2.50 (Calif. residents add 7.25% sales tax; U.S. checks or money orders payable to “UC Regents”; note title of publication on check), or order from Washington State University at (800) 723-1763.

For more information: Gail Feenstra, SAREP, One Shields Ave., University of California, Davis, CA 95616; Email: gwfeenstra@ucdavis.edu.

DEC.599 Contributed by Gail Feenstra
Resources

Community Food Systems

Growing a Community Food System, by Steven Garrett, Washington State University Extension faculty and Gail Feenstra, UC SAREP (1999). Community Ventures Series, Western Regional Extension Publication, WREP0135. This is a practical publication for professionals and community non-profits interested in developing local or regional community food system projects. It defines the concept of a community food system, and describes steps for developing projects, including coalition building, strategic planning, resource development, community assessment, project infrastructure, project implementation and evaluation. It describes two community food systems models, the Tahoma Food System in Tacoma Wash., and PlacerGROWN, in Placer County, Calif. to illustrate these concepts. To order, send U.S. check or money order payable to “UC Regents” (note title of publication on check) for $2.50 to UC SAREP, University of California, One Shields Ave., Davis, CA 95616-8716; Tel: (530) 752-7556; Fax: (530) 754-8550; Email: sarep@ucdavis.edu; World Wide Web: http://www.sarep.ucdavis.edu

Learning from Community Gardens

Entrepreneurial Community Gardens: Growing Food, Skills, Jobs and Communities, by Gail Feenstra and Sharyl McGrew (UC SAREP), and David Campbell (California Communities Program), 110 pages, 1999, University of California DANR Publication 21587. Market gardens have gained attention as ways to enhance community economic development, increase community food security and employ local residents. These gardens are promising vehicles for providing job training, life skills, educational opportunities, improving the quality of life and forming creative collaborations in local communities. This study describes conditions under which they prosper or fail, and provides comparative data to help new garden projects judge their own capacities. The report includes a comparative analysis of 27 entrepreneurial gardens, five case studies and appendices with urban agriculture and gardening contacts, a contact list of entrepreneurial community gardens, business development resources and funding opportunities for job creation and training in urban agriculture. The price is $10 (Calif. residents add 8.25% sales tax) plus shipping and handling. To order, contact University of California, DANR Communication Services, 6701 San Pablo Avenue, Oakland, CA 94608-1239; Tel: (800) 994-8849 or (510) 642-2431; Fax: (510) 643-5470; Email: danrcs@ucdavis.edu Payment may be by VISA or MasterCard, U.S. check or money order (payable to “UC Regents”) or purchase order.

Direct Market Law Guide

Legal Guide for Direct Farm Marketing, 235 pages, 1999, Neil Hamilton,
Drake University Agricultural Law Center. Farmers and ranchers involved or interested in direct marketing will find answers to pressing legal questions in this guide, funded by USDA’s Sustainable Agriculture Research and Education (SARE) program. Funded by North Central Region SARE’s Professional Development Program, the Legal Guide answers common questions about laws on marketing products directly to consumers and to retail and wholesale buyers. Hamilton wrote the book for farmers involved in direct marketing produce, livestock and other food products, and for farm advisors, including extension educators and attorneys working with farm marketers. Twelve chapters cover legal issues on farmers markets; on-farm businesses; contracts, food stamps and getting paid; advertising, organic certification and eco-labels; land use and property law; labor and employment; insurance and liability; and inspection, processing and food safety. Included are contacts and resources throughout the U.S. Hamilton teaches agricultural law and raises fresh vegetables on his Iowa farm for sale to restaurants. Cost: $20. Contact Drake University Agricultural Law Center, Des Moines, IA 50311; (515) 271-2947. Volume discounts are available on orders of 20 or more.

Urban Ag in Cuba

*Cultivating Havana: Urban Agriculture and Food Security in the Years of Crisis, IFDP Development Report No. 12*, by Catherine Murphy. 58 pages. The Institute for Food and Development Policy/Food First. This report describes the success of the urban agriculture movement in Havana as part of Cuba’s national transformation to sustainable agriculture. With more than 8,000 hectares of urban farms, 25,000 urban farmers, and hundreds of researchers and extension workers, Havana has become a leader in urban agriculture. Aimed at Cuba policy and sustainable development professionals and educators. To view the Executive Summary and Table of Contents access http://www.foodfirst.org/pubs/. To order, send a check or money order for $9 ($6 + $3 shipping and handling) to The Institute for Food and Development Policy (Food First), 398 60th Street, Oakland, CA. 94618. California residents add 8.25 percent sales tax. International orders must be prepaid in US dollars and require an additional $1 for shipping. Credit card orders can be made by phone at (510) 654-4400, or order on the Web at http://www.foodfirst.org/pub/
New Winegrape ‘Eco Labeling’ Publication Available

Will consumers buy more wine if it’s produced in an environmentally friendly way? That is the focus of a new publication *Exploring Eco Labeling for California Winegrapes: A Working Conference*, proceedings from a national conference where winegrape growers, winery representatives, consumers, researchers, pest control advisers and retailers made presentations on the issue.

“‘Eco labeling’ offers consumers a choice, and growers a potential marketplace advantage for using environmentally sound growing practices,” says Jenny Broome, plant pathologist and associate director of SAREP, which co-sponsored the Sacramento conference.

Broome, the principal editor of the publication, says articles in the proceedings draw upon lessons learned in eco labeling projects from around the country. Topics include information on retail programs that support eco labels, local and regional marketing programs, results of a survey of California wineries and their interest in eco labeling, lessons learned from the organic experience, and resource lists that include organizations with labeling programs.

One of the presentations included is from an integrated vineyard farming system developed by the Central Coast Vineyard Team, of which Broome is a member. “The team’s Positive Points System is an example of a farming system that could be the basis of an eco label for California winegrape growers,” she said.

The Lodi Woodbridge Winegrape Commission (LWWC) received funding for the event from the U.S. Environmental Protection Agency; the conference and proceedings were also co-sponsored by the California Association of Winegrape Growers, the LWWC, and the Robert Mondavi Winery. The proceedings are available in printed form at no charge from SAREP, University of California, One Shields Ave., Davis, CA 95616-8716 and on its Web site, [http://www.sarep.ucdavis.edu/pubs/](http://www.sarep.ucdavis.edu/pubs/).
Coming: Environmental Regulations Guide for Vineyard Development

At the request of the California Association of Winegrape Growers, SAREP is developing a resource guide describing important environmental issues and federal, state, and county regulations related to vineyard development.

“California grape growers want to ‘do the right thing’ about environmental issues and regulations when it comes to developing their vineyards, but they need they need to know the rules in order to do so,” says Jenny Broome, SAREP associate director.

The grower resource guide will:

- Identify environmental issues to be considered in vineyard development;
- Identify existing regulatory programs, including county ordinances and permits, state and federal laws;
- Identify necessary steps for complying with existing regulations;
- Compile information on valuable resources for growers seeking more information, including publications and agency contacts.

General environmental issues to be considered include erosion, hillside development, oak woodlands conservation, vernal pools and wetlands, riparian area development, water quality, air quality, habitat conservation, and endangered species. When possible, information on voluntary compliance and incentive programs will also be provided, although the project focuses mainly on existing environmental regulations. The resource guide is expected to be available to growers by spring 2000.

For more information, please contact SAREP, One Shields Avenue, Davis, CA 95616, Tel: (530) 754-8547; Fax: (530) 754-8550; Email: sarep@ucdavis.edu.
Sources of Funding

**SAREP Grants**

Look for SAREP Requests for Proposals (RFPs) to be released in January 2000. SAREP expects to offer grants for graduate student support (up to $3,000 per individual) and educational events (up to $1,000 per event). These grant awards will be allocated in July 2000. RFPs will be sent to all California residents on the SAREP mailing list and will be posted on the Web site (www.sarep.ucdavis.edu) as soon as they are released. For more information, please contact SAREP grants manager Bev Ransom at (530) 754-8546 or baransom@ucdavis.edu.

**USDA-SARE Producer Grants**

Producers and producer groups residing in the Western U.S. can compete for grants to identify, evaluate and test their “in-the-field” sustainable agriculture practices and challenges through an effort sponsored by the USDA Western Sustainable Agriculture Research and Education (Western SARE) program. The call for proposals will be released in mid-October 1999. Completed proposals are due at the program’s headquarters office at Utah State University by 5:00 p.m. (Mountain Standard Time) January 15, 2000. Individuals may apply for grants of up to $5,000; producer groups (three or more farm/ranch operations working cooperatively) may apply for up to $10,000. To request application materials, contact the host office at Utah State University at (435) 797-2257 or by email at wsare@mendel.usu.edu. The call for proposals is also available on-line at the Western SARE Web site, http://wsare.usu.edu/.

Grant reviewers will be looking for proposals that clearly define local sustainable agriculture problems or issues and propose innovative solutions. On-farm tests of suggested technologies and approaches are strongly encouraged. All research proposals must be led by one or more producers, include a professional agricultural technical advisor (i.e., farm advisor or university researcher), and provide a plan for sharing information gained with others in the community. Any commercial producer or producer group is eligible to apply for a grant. All funding is awarded competitively. The federal SARE program is managed by the U.S. Department of Agriculture’s Cooperative State Research, Education and Extension Service, and directed regionally by four independent, broad-based councils. Utah State University is host to the SARE program in the Western region, which includes Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming and the Island Protectorates.

**Federal Food Projects Grants**

The USDA’s Community Food Projects Competitive Grants Program
Request for Proposals for 2000 is expected to be released in late winter/early spring 2000. Approximately $2.5 million will be available each year through 2002. To find information on previously funded projects and to stay current with funding opportunities, access the program’s Web site: www.reeusda.gov/crgam/cfp/community.htm.
Calendar

* SAREP WEB CALENDAR

SAREP offers a regularly updated sustainable agriculture calendar on our World Wide Web site at: http://www.sarep.ucdavis.edu/ (click on “Course, Workshops, Events”). Please feel free to add sustainable agriculture events.

* NATIONAL/INTERNATIONAL CALENDAR

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

* MONTHLY MEETINGS

Lighthouse Farm Network: The Community Alliance with Family Farmers Foundation sponsors informal monthly meetings for growers to discuss issues related to pesticide use reduction. Contact: Reggie Knox, CAFF, (831) 457-1007.

NOVEMBER 1999


7-9 Cultivating the Farm-City Connection: 1999 Small Farm Conference, Berkeley, Calif. Sponsors: Community Alliance with Family Farmers, UC Santa Cruz Center for Agroecology & Sustainable Food Systems, Center for Urban Education on Sustainable Agriculture, California Federation of Certified Farmers Markets, Golden Gate Farmers Market Association, UC Cooperative Extension (Alameda/Contra Costa counties), USDA Farm Service Agency, Ecology Center of Berkeley. Short courses, tours, tasting. Raddison Hotel. Contact: Kinene Barzin, (510) 588-5444; kbarzin@compuserv.com; Tom Haller or David Visher at CAFF, (530) 756-8518 x16; http://www.caaff.org/farmconference.html

17 Bring Farm Edges Back to Life: Vegetated Roadsides & Ditches, 2-hour field workshop, Borchard Farms’ CB Ranch, Woodland, Yolo County. Free. Sponsors: Yolo County Resource Conservation District, Community Alliance with Family Farmers, UC SAREP/ International Tree Crops Institute. Contact: Paul Robins, Yolo County Resource Conservation District, (530) 662-2037 ext. 3, rcdnatives@hotmail.com
Fertilizer Research/SAREP Conference, Modesto, Calif. Dept. of Food & Ag’s (CDFA) Fertilizer Research & Educ. Prog. (FREP) 7th annual conference jointly organized with UC SAREP, Doubletree Hotel. Focus: relationship between nutrient management & soil & environmental quality. Contact: Debbie Scott, (916) 653-5340, dscott@cfda.ca.gov

DECEMBER 1999

14-15 Pest Science Conference 1999, UC Davis. Sponsors: UC IPM, coop. Exten., & 9 UCD depts. Tues. 9am-4:30pm; Wed. 9am-1pm. Freeborn Hall, UCD. Fee: $125. Credit: 1.0 CUs. 10hrs-PCA hours. 10hrs-CCA. Contact UC Extension, University of California, Davis, CA 95616-4852; (800) 752-0881; http://universityextension.ucdavis.edu/registration/enrollmpf.html

JANUARY 2000


FEBRUARY 2000


10-11 Conservation Tillage Conferences, 2 locations: Thurs., Feb. 10, UC West Side Research & Extension Center, Five Points, CA, & Fri., Feb. 11, UC Davis Western Equipment & Technology Center, Davis, Calif. Presentations on successful reduced tillage crop production systems, equipment & management. Speakers from throughout U.S. Topics: management goals, innovative practices, equipment, results. Contact: Kitty Schlosser, UCD Vegetable Research & Information Center, (530) 752-1748; meschlosser@ucdavis.edu

MARCH 2000

TBA Bring Farm Edges Back to Life: Vegetation Management on Streams & Canals with Native Plants, 2-hour field workshop, Hedgerow Farms, Winters, Yolo County. Free. Sponsors: Yolo County Resource Conservation District, Community Alliance with Family Farmers, UC SAREP/International Tree Crops Institute. Contact: Paul Robins, Yolo County Resource Conservation District, (530) 662-2037 ext. 3, rednatives@hotmail.com

6-9 19th Vertebrate Pest Conference, Mission Valley Hilton Hotel, San Diego, CA. Conference chair: Terrell Salmon, Wildlife, Fish & Conservation Biology, University of California, One Shields Ave., Davis, CA 95616. (530) 752-8751; Fax: (530) 752-4154; tpsalmon@ucdavis.edu; http://www.davis.com/~vpc/ welcome.html
7-9 Farming and Ranching for Profit, Stewardship & Community, USDA Western Region Sustainable Agriculture Research and Education (SARE) program conference, Portland, Oregon. For producers, researchers, ag extension agents, scientists, policymakers, agribusiness representatives, educators. Will highlight SARE-funded research/education projects on cropping systems, grazing/livestock, biological pest control, community food systems, direct marketing. Contact: Gina Hashagen, Dept. of Horticulture, Oregon State University, Corvallis, OR at (541) 737-5477 or Mary Staben, (541) 737-5437, stabenm@bcc.orst.edu


APRIL 2000

TBA Bring Farm Edges Back to Life: Winter Cover Crops in Annual Row Crops for Soil Quality & Winter Runoff Reduction, 2-hour field workshop, Yolo County. Free. Sponsors: Yolo County Resource Conservation District, Community Alliance with Family Farmers, UC SAREP/International Tree Crops Institute. Contact: Paul Robins, Yolo County Resource Conservation District, (530) 662-2037 ext. 3, rednatives@hotmail.com
SUSTAINABLE AGRICULTURE is a publication of the UC Sustainable Agriculture Research and Education Program (SAREP). SAREP provides leadership and support for scientific research and education to encourage farmers, farmworkers, and consumers in California to produce, distribute, process and consume food and fiber in a manner that is economically viable, sustains natural resources and biodiversity, and enhances the quality of life in the state’s diverse communities for present and future generations.

SUSTAINABLE AGRICULTURE is published three times yearly by SAREP staff from its UC Davis offices, with assistance from Circle Design, Sacramento. Mailing address is: UC Sustainable Agriculture Research & Education Program, University of California, One Shields Ave., Davis, CA 95616-8716.

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