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*From the Director*

## **Growth in Biologically Integrated, Organic Systems in California**

Two important milestones this winter have shaped SAREP's strategic response to progress and change in sustainable agriculture in California. First, the second year reporting from current Biologically Integrated Farming Systems (BIFS) projects has been received (see "[Project Update](#)") and SAREP has compiled the results into a biennial report transmitted to the State Legislature under provisions of AB 1998, a bill carried by Assemblywoman **Helen Thomson** in 1998. The BIFS report documents elimination and large reductions in high-risk agrichemicals in several production systems. For example the walnut BIFS project (P.I.: **Joe Grant**) demonstrated that by the use of pheromone-based mating disruption technology for codling moth control, 83 percent of enrolled growers eliminated the use of organophosphate insecticides in 2000. Seventy-five percent of enrolled growers planted cover crops as a cornerstone of a biologically integrated production system for walnuts. In the prune BIFS project (P.I.: **Gary Obenauf**), 33 enrolled farms demonstrated complete elimination of winter diazinon application. In its first year, the apple BIFS project (P.I.: **Janet Caprile**) reported a 59 percent reduction of organophosphate use and a 92 percent reduction of carbamate use for codling moth control. On 1,330 acres of enrolled rice BIFS acreage (P.I.: **Randall Mutters**), average herbicide use is less than half of county averages. The strawberry BIFS (P.I.: **Carolee Bull**) has reported the first evaluation of commercially available strawberry cultivars (mostly UC patented varieties) for performance under non-fumigated, certified organic production conditions. Altogether these BIFS projects report a more than 40 percent increase in enrolled growers in 2000 over 1999 participation.

The results continue to demonstrate the acceptance and strength of the research and extension partnership model promoted by the BIFS grants program in our farm communities. Farmers, researchers, agricultural professionals, and community members, funded and organized as management and outreach teams, can take rapid steps to implement the biological integration of production systems for major California commodities. SAREP Associate Director **Jenny Broome** and I have recently estimated that over seven percent of the planted area of California SAREP-funded BIFS project commodities have been served by these partnerships [see *California Agriculture* 54(4): 26-35]. Given the growth in BIFS and BIFS-type partnerships, we have documented that California's farmers and ranchers are increasingly playing a critical role in the stewardship of California's environment, and that numerous innovative growers are now advancing in the biological integration of their production systems. Growth in organic production and acreage has also accelerated in California, with California's farmgate share of organic sales estimated in excess of \$200 million. We predict that over the next 25 years, biologically integrated and organic production systems will constitute the majority of California's farms and

ranches, and California growers will maintain a preeminent role in the worldwide agricultural sustainability movement.

Now for the bad news. At this time, no new state BIFS program funds are in the pipeline to support new projects and commodity partnerships. The continuation of a successful extension and demonstration model with clear environmental and community benefits is at risk. California's farmers and ranchers, under multiple economic, environmental, and social pressures, need support for innovation from our public institutions.

The second milestone this winter is the final version of the National Organic Program rule, which was issued in the Federal Register with an adoption date of February 20, 2001 (an 18-month phase-in period is contemplated). National organic standards are now in place. Although debate about the rules and accommodation to a national materials list, labeling requirements, and USDA accreditation of certifiers will continue, clearly these rules constitute a major passage toward maturation of the organic production industry. Given the rapid growth rate of organic production experienced recently in California, we predict that an increased number of new entrants into the organic industry will experience challenges adhering to production systems processes and requirements of the rule. According to a recent publication of the Organic Farming Research Foundation (*State of the States: Organic Farming Systems Research at Land Grant Institutions 2000-2001*) "...a coordinated, concerted effort to optimize organic systems with science-based information is still lacking at the land grant level [in California]." Organic production is expanding on a very limited research and extension base. Although SAREP's recent RFP offered specific project funding for "optimizing organic production," this research investment into organic methods lags far behind organic product sales in magnitude. How will we respond to this contradiction? Under SAREP's strategic plan, a group of UC faculty, specialists, and farm advisors will convene an organic farming workgroup and seek ratification by UC ANR this spring. SAREP will collaborate with the workgroup in the creation of new resources for county-based programs, strengthening grants programs, sponsoring extension and annual scientific meetings, and other activities in targeted support of organic growers. The organic production industry has arrived. A coordinated, well-funded University of California organic farming research and extension project is long overdue.—*Sean L. Swezey, director, University of California Sustainable Agriculture Research and Education Program.*

## Marco Barzman joins SAREP staff

SAREP welcomes new staff member **Marco Barzman**, who is working on impact assessment of the Biologically Integrated Farming Systems (BIFS) Program and individual projects. He will develop and implement methods to assess the impact of BIFS projects on the attitudes and practices of farmers, advisors, pest control advisors (PCAs) and others within the relevant commodity.

Barzman will also be comparing the BIFS team-based extension approach to more linear styles of information exchange. SAREP will use this information to evaluate and improve outreach for BIFS projects. Barzman received a bachelor of science degree in biology from UCLA and a doctorate in entomology with a focus on agroecology from UC Berkeley. He comes to SAREP from Bangladesh, where he coordinated a CARE project promoting the integration of fish and vegetable production in rice paddy fields. CARE is an international non-governmental organization working in developing countries. The CARE-Bangladesh project provided training to 30,000 farmers using participatory extension methods. Previously Barzman worked with the Consultative Group on International Agricultural Research to promote sustainable agriculture research internationally. He also worked with rice growers in the Dominican Republic to identify information flow about the use of agrochemicals, and was involved in a study on the traditional use of weaver ants in citrus in Vietnam's Mekong delta.

## Staff Project Update

# Winegrape Growers Receive Funds to Reduce Pesticide Risks

The Winegrape Pest Management Alliance (PMA), comprised of grower organizations throughout California, was recently awarded a second grant of \$100,000 by the Department of Pesticide Regulation (DPR) to support a new effort to increase grower awareness about the adoption of reduced-risk practices for managing vineyard pests. PMA received the first award from DPR in June 2000.



This Gallo vineyard makes use of cover crops to enhance soil fertility. (photo by Robert L. Bugg)

Building on past successful efforts like the Biologically Integrated Farming Systems (BIFS) project of the Lodi Woodbridge Winegrape Commission, winegrape growers will be participating in a statewide effort to speed the adoption of reduced-risk pest management.

The PMA will focus its first efforts on demonstration and outreach related to sustainable sulfur use and reduced-risk weed management. In addition to the funding from DPR, more than 50 percent of the project costs are shared by the California Association of Winegrape Growers (CAWG) and by in-kind contributions of time and expertise from regional winegrape organizations and University of California researchers and educators. CAWG is providing administrative leadership for the project; **Karen Ross**, CAWG president, is serving as the project's principle investigator. **Jenny Broome**, SAREP associate director, is one of the technical advisors to the winegrape PMA, while **Joe Browde** is PMA project coordinator.

“For California’s winegrape growers, this is the latest and by far the broadest attempt yet at promoting sustainable agriculture through a collaborative effort of demonstration and outreach,” said Broome.

The PMA is targeting sulfur and weed management; on a statewide level, there have been recurring incidences of sulfur dust drifting into sensitive areas, including school zones and public highways. Similarly, herbicides used in grape production have been found in groundwater in some areas of the state.

“While sulfur and herbicides remain important farming tools for winegrape growers across California, their continued use may depend on how well the industry can demonstrate alternative practices and farming systems that reduce the potential risk of these materials,” said Ross. “Through statewide field demonstrations and aggressive outreach, the PMA intends to reduce complaints of sulfur drift and uses of higher-risk herbicides while sustaining

the economic viability of viticulture.”

Key to the project’s potential success is the fact that it is grower-driven, said Browde.

“Although representatives from extension, research, and regulatory agencies provide technical assistance, it is the growers who have devised, are implementing, and, in short, own the program,” he said.

Grower-led programs in sustainable viticulture and integrated farming systems have been successful elsewhere at the regional level, including the Lodi-Woodbridge Winegrape Commission, Central Coast Vineyard Team, the Napa Sustainable Winegrowing Group, and Sonoma County Grape Growers Association.

“The PMA project is unique in its statewide coverage, commitment, and implementation,” Broome said.

As with the above efforts, effective grower-to-grower transfer of relevant information is key, Broome added. To that end, more than 30 demonstration vineyards have been established with grower-cooperators throughout five winegrape regions in California: North Coast, Central Coast, South Coast, Northern Interior, and South Central Valley. Grower-cooperators are recording their various reduced-risk practices for sulfur and weed management and will share and showcase practices at field days. Educational information is being provided via state and regional newsletters and Web sites. In addition, Browde, Ross, Broome and leaders of regional organizations are making presentations and otherwise communicating information about reduced-risk pest management throughout the state.

To share softer approaches to weed and mildew management from your own operations or to learn more about the PMA, contact Browde at (707) 776-4943, [mjbrowde@pacbell.net](mailto:mjbrowde@pacbell.net); Ross at (800) 241-1800 (CA only), (916) 924-5374, [info@cawg.org](mailto:info@cawg.org); or SAREP at (530) 754-8547, [sarep@ucdavis.edu](mailto:sarep@ucdavis.edu).

Steering Committee members include Randall Lange, Steve Quashnick, Karen Ross, CAWG; Howard Babcock and Rhonda Hood, North Coast Grape Growers Association; Jeff Bitter, Allied Grape Growers; Mike Boer, Mendocino Winegrowers Alliance; Nick Frey, Sonoma County Grape Growers Association; Patrick Gleeson, American Vineyard Foundation; Steve Kautz, Calaveras Wine Association; David Lucas, Robert Mondavi Winery; Kelly Maher and Julie Nord, Napa Valley Grape Growers; Kris O’Connor, Central Coast Vineyard Team; Cliff Ohmart, Lodi Woodbridge Winegrape Commission; Ken Wilson, Clarksburg Wine Growers; Jason Smith, Monterey County Grape Growers. Technical advisors are Jenny Broome, UC SAREP; Lori Ann Thrupp, U.S. EPA - Region 9 Agricultural Initiative; Sewell Simmons, Department of Pesticide Regulation; and Joe Browde.

## ***Project Update***

# **Rice, walnut, citrus, strawberry, apple, prune, dairy BIFS projects reduce chemicals**

By Max Stevenson, SAREP

*Note: The Biologically Integrated Farming Systems (BIFS) grants program provides extension services, training, and financial incentives for farmers who voluntarily participate in pilot projects to reduce their use of agricultural chemicals. Since 1995, SAREP has provided funding that totals \$2,090,741 for BIFS projects in nine crops. SAREP is required to submit a BIFS biennial report to the California State Legislature. The following is from the executive summary of the most recent biennial report.*



The strawberry BIFS project evaluated strawberry cultivars for performance under non-fumigated field conditions in California. (photo by Max Stevenson)

The BIFS farming systems show great potential to reduce dependence on the most toxic pesticides and the overuse of fertilizers. For example, the walnut BIFS project has reduced nitrogen fertilizer application rates by an average of 53 lbs./acre, with no apparent effect on yield. This can help protect groundwater from nitrate pollution. The prune BIFS project has eliminated wintertime sprays of organophosphate insecticides. Eliminating these sprays protects California rivers from toxicity problems. Other BIFS projects have also shown dramatic reductions in targeted pesticides, and increases in farming practices that reduce offsite movement of agricultural chemicals.

Each BIFS project is funded for three years, at approximately \$100,000 per year, although some projects are smaller. Projects working with nine different crops have been funded since the inception of BIFS. Projects in winegrapes and cotton ended in 1998. As of December 2000, seven BIFS projects are active: rice in Butte County, walnuts in San Joaquin County, citrus in Fresno County, strawberries on the Central Coast, apples in Contra Costa County, prunes throughout the Central Valley, and dairies, also throughout the Central Valley. The apple and dairy projects will end in 2002, while the others end in 2001. Although all BIFS projects are funded to their end dates, no further state funds have been identified for new projects. A small amount of federal funds may support two to three new projects for the next few years (see "[Sources of Funding](#)").

The BIFS projects use an extension approach that involves public-private cooperation; this approach is often called a "farmer-to-farmer" method of information sharing. It brings scientists, farmers and consultants together in a collaborative, "co-learning" environment that enables participants to learn and adapt integrated farming practices to local conditions. It is patterned after the

Biologically Integrated Orchard Systems (BIOS) project, initiated by the Community Alliance with Family Farmers (CAFF). BIFS project participants develop reduced pesticide and fertilizer practices that are economically sound. Each BIFS project has enrolled between eight and 33 farms. Enrolled farms are used for testing new methods, demonstrating proven techniques, and hosting field days. Field days are used by the projects as an outreach tool, because one of the main project goals is to increase the adoption of BIFS practices.

### **More BIFS, less pesticides**

As of 2000, approximately 2.2 percent of California farmland is farmed by BIFS growers. If the increased adoption of BIFS practices continues, the use and risks of pesticide and fertilizer applications will be reduced. In California, systematic analysis of selected pesticides of environmental concern reveals usage to be fairly constant since 1992, with no large decreases or increases in use. If the majority of farms adopt BIFS practices, there would be a dramatic reduction in pesticide and fertilizer use. As BIFS farming systems are developed for each crop, increased outreach, over the long term, is necessary to continue to increase the adoption of environmentally friendly agriculture.

This summary is from the third BIFS biennial report to the California Legislature; the first report covers activities from January 1995 through December 1996 (available at [www.sarep.ucdavis.edu/bifs/bifs97/](http://www.sarep.ucdavis.edu/bifs/bifs97/)), while the second report covers from January 1997 to December 1998 (available at [www.sarep.ucdavis.edu/bifs/bifs99/](http://www.sarep.ucdavis.edu/bifs/bifs99/)). The current report describes the implementation of the BIFS program between January 1999 and December 2000.

## **PROJECT HIGHLIGHTS**

### **Prune BIFS**

During 1999 and 2000, winter applications of diazinon, an organophosphate (OP) insecticide, were eliminated in the demonstration/ research sites of the 33 enrolled farms (12 funded by the BIFS program). Diazinon is the main contributor to wintertime toxicity of California river water. The use of irrigation water was also reduced on almost all prune BIFS farms, due to careful, plant-based monitoring. To promote prune BIFS practices, such as the use of cover crops and fewer fertilizer applications, over 24 educational meetings were held in 2000 with an audience of more than 1,100. The number of enrolled farms has increased 33 percent from 1999 when 22 farms were enrolled.

### **Walnut BIFS**

In 2000, 12 walnut orchards were enrolled in BIOS for walnuts (the official name of the BIFS walnut project), up from 10 in 1999. The use of pheromone mating disruption technology to control codling moth allowed 83 percent of the enrolled BIOS orchards to eliminate the use of





Fred Thomas, cover crops expert and BIFS management team member, explains how to measure nitrogen in cover crops at a walnut BIFS field day.

organophosphate insecticides in 2000.

In 2000, BIOS growers reduced applications of nitrogen (N) fertilizer by an average of 53 pounds per acre since 1998. Use of cover crops by enrolled growers increased from 60 percent in 1999 to 75 percent in 2000. Cover crops are a cornerstone of an integrated orchard production system. Cover crops can provide beneficial insect habitat, reduce runoff of agricultural chemicals and nutrients, and in some cases provide a biological source of nitrogen for the walnut trees.

### **Apple BIFS**

Nineteen orchards (11 funded by the BIFS program), totaling 656 acres, were enrolled in the apple project in 2000, the first year of this project. The BIFS orchards, by using pheromone mating disruption, were able to reduce the use of organophosphates by 59 percent and carbamates by 92 percent in their first year. The use of all traditional pesticides was reduced in the BIFS orchards by 72 percent. The amount of reduced risk materials (pounds of active ingredient per acre) comprised 93 percent of all pest management materials used. Since the apple BIFS project has provided a cost share for codling moth control materials, the actual grower cost is \$296/acre, which is only \$10 more than the conventional cost.

### **Rice BIFS**

Nine demonstration farms, on over 1330 acres, were enrolled in rice BIFS during 2000, up from eight farms in 1999. Collectively, participating growers manage more than 14,000 acres of rice. Alternative practices promoted by the project focus on non-chemical weed control strategies and reduced use of chemical fertilizer. On a per acre basis, BIFS project growers use less than half the amount of herbicides on their entire acreage, compared to the county average.

### **Dairy BIFS**

The dairy BIFS project worked with 11 dairy producers throughout the San Joaquin Valley in 2000, the first full year of this project. Dairy BIFS focuses on developing and demonstrating improved liquid manure management practices. Data collected so far has shown that it is feasible to use manure lagoon water nutrients to fertilize the dairy's forage crop and reduce the amount of synthetic



BIFS dairy project farmers observe a flow meter demonstration at the Wilbur Brothers Dairy in Tulare County. (photo by Shannon Mueller)

fertilizer. For example, lagoon water nutrients were successfully used to grow silage corn at Dairy 8 in 1999 with yields (29.7 tons/acre) similar to fields where commercial fertilizer supplied needed nutrients (27.6 tons/acre). Controlled use of lagoon water nutrients can help keep those nutrients from contaminating ground water drinking supplies.

### **Strawberry BIFS**

Fourteen farms enrolled 21 acres in the strawberry BIFS project in 2000, up from seven growers with 10.5 acres in 1999. Strawberry BIFS provides intensive one-on-one scientist-grower interactions. This project focuses on developing alternatives to the soon-to-be-banned fumigant methyl bromide, as well as aboveground pests like Lygus. The strawberry BIFS project has completed the first evaluation of commercially available strawberry cultivars for performance under non-fumigated field conditions in California. These trials showed that Aromas, Pacific, and Seascape were the top performers.

### **Citrus BIFS**

The citrus BIFS project has undergone some changes in 2000. A new principal investigator has joined the project. In 2000, eight farms were enrolled. Citrus BIFS focuses on reducing the use of the herbicide simazine (a known groundwater contaminant), reducing organophosphate insecticide and fertilizer use, and increasing the use of cover crops.



The citrus BIFS project focuses on reducing the use of the herbicide simazine, reducing organophosphate insecticide and fertilizer use, and increasing the use of cover crops. *(photo by Mark Freeman)*

## New SAREP PAC/TAC Members

by Lyra Halprin and Bev Ransom, SAREP

SAREP, established almost 15 years ago, welcomes new members to its Program and Technical advisory committees every year. The committees were created to advise SAREP on program goals and make recommendations on competitive grants. The Program Advisory Committee (PAC) includes individuals actively involved in agricultural production, as well as representatives from government, public organizations, and institutions of higher education. The Technical Advisory Committee (TAC) is made up of faculty and staff from universities and colleges throughout California with knowledge and experience related to sustainable agriculture.

Under the guidance of the PAC and TAC, SAREP adapts to changing circumstances and needs throughout the state. Last fall, SAREP convened retiring, current, and new advisory committee members to revise the program's strategic plan. Committee members confirmed that SAREP's main goals are: 1) to support California farmers in developing and implementing sustainable production and marketing systems, and 2) to support California's rural and urban communities in understanding and participating in sustainable food and agricultural systems.

"Our new advisory members continually teach us more about the needs and concerns of those we are trying to reach throughout the state," said **Sean L. Swezey**, SAREP director. "As we broaden the makeup of our committees, our potential impact throughout the state grows."

This spring, advisory committee members will be reviewing grant proposals and will recommend funding projects that can most effectively accomplish SAREP's goals.

The following individuals have agreed to serve a three-year term on SAREP's advisory committees:

### Program Advisory Committee

❖ **DAN BENEDETTI** is one of seven partners who operate Clover Stornetta Farms, Inc., a milk processor and distributor in Northern California. As president, he is in charge of sales and public relations marketing. Clover has created a total approach to sustainable dairying through its North Coast Excellence Program, and also offers its own line of organic milk. Dan is committed to sustainable agricultural practices, organic dairy operations and the standards of Clover Stornetta's North Coast Excellence program, which he believes help ensure the future of dozens of family farms in the San Francisco Bay Area. These systems reflect Clover's desire to reconnect the consumer with the producer. In 2000, Clover was the first dairy in the United States to receive the *Free Farmed* label by the American Humane Association. Dan is a past president of the Dairy Institute of California and the Sonoma County Agricultural Marketing Program, is president of the Associated Independent

Dairies of America, an advisor to the Redwood Empire Food Bank, a board member of California Independent Grocers Association, a member of advisory boards at Santa Rosa Junior College, California State University, Sonoma, and The Culinary Institute of America.

❖ **STACIE CLARY** is the director of the California Sustainable Agriculture Working Group, a statewide coalition of farmers, consumers, environmentalists and farmworkers dedicated to promoting a sustainable and socially just food system. She is particularly interested in increased funding for sustainable and organic agriculture on-farm research and extension, state and federal policies benefiting small-scale and sustainable farmers, and community food security and labor issues. She has an 11-year history working with environmental and social justice coalitions, and has extensive experience motivating activists and volunteers, implementing public education campaigns, analyzing and shaping public policy, working with public officials, and fundraising. She is based in Santa Cruz.

❖ **WILLIAM LACY** is Vice Provost—University Outreach and International Programs, and is a professor of sociology in the Department of Human and Community Development at UC Davis. Before coming to UCD in 1999, he was the director of Cornell Cooperative Extension and associate dean of the Colleges of Agriculture and Life Sciences and Human Ecology at Cornell University. The author/co-author of numerous journal articles and book chapters and six books on education, science, agricultural research and extension and biotechnology and biodiversity, he served on the administrative council of the USDA Northeast Sustainable Agriculture Research and Education (SARE) program.

❖ **DAVID LIGHTHALL** is the executive director of the California Institute for Rural Studies (CIRS), an independent non-profit research organization located in Davis. His research interests include agricultural labor and immigration, technological hazards in agriculture, environmental health, food system policy, and sustainable rural development. Prior to joining CIRS, he taught at Colgate University in New York. Many of his publications focus on the interrelationships between social justice and technological change in agriculture. Within this area, he is particularly interested in the public health impacts of pesticides, the development of less toxic production practices, and improved health care and working conditions for farm workers. He has extensive experience conducting field survey projects in Hyderabad, India, the Corn Belt and High Plains of the U.S., and California. He recently directed a CIRS statewide health study of 971 California farmworkers funded by The California Endowment; it is the first randomized baseline health study of U.S. farmworkers.

❖ **CRAIG McNAMARA** is the president and owner of Sierra Orchards, a diversified farming operation in Winters, Solano County. The farm produces primarily walnuts and grape rootstock and includes field, processing and marketing operations. He is the founder and executive director of the FARMS Leadership Program, which helps high school students become lifelong learners and community builders through an understanding of sustainable agriculture. He has served as a board member of California Foundation for Agriculture in the Classroom and currently is an advisor to the Trust for Public Lands, and Project Food, Land and People. A graduate of the California Agricultural Leadership Program, Craig serves on the Diversity and Inclusion

committees of the Agricultural Education Foundation and the California Walnut Commission, where he also serves as commissioner. Craig lives with his wife and three children in Winters, where he is a 4-H leader and school board member.

❖ **ARTHUR NALDOZA** is the deputy director of La Cooperativa Campesina de California, based in Sacramento. A Salinas native educated at San Francisco State, he was a rural clinic director, a staff consultant at the Center for Community Change, the executive director of Health Officers Association of California, and a lobbyist for Naldoza and Associates before assuming his current responsibilities. His areas of expertise are employment, health and education, and he is particularly interested in the stabilization of the agricultural work force.

❖ **KAREN ROSS** is the president of the California Association of Winegrape Growers (CAWG), a statewide association dedicated to enhancing the business of growing winegrapes through research, advocacy and industry leadership. She is also the executive director for Winegrape Growers of America, a national organization of state winegrower organizations. Karen previously served as vice president of government affairs for the Agricultural Council of California, and before coming to California was the government relations director for the Nebraska Rural Electric Association and field staff director for the late U.S. Senator Edward Zorinsky. In 1998, Ross was appointed by Governor Gray Davis to his Agriculture and Water Policy Transition Advisory Committee. She serves on the board of the Agricultural Education Foundation, the Ag Advisory Committee for the California State Fair, the California Wine Education Foundation, Women for WineSense, and the Ag Network. Ross serves on the board for St. John's Shelter for Women and Children and is a former president of Soroptimist International of Metropolitan Sacramento.

### **Technical Advisory Committee**

❖ **KENT DAANE** is an UC Cooperative Extension associate specialist in the Division of Insect Biology (ESPM) at UC Berkeley. His areas of interest include research in the biological control of insect pests in almonds, grapes, stone fruits, olives and pistachio crops; sustainable agriculture; insect-plant interactions; and the biology of parasites. Kent has lectured on insect biology, conservation and resource studies, enology and viticulture, and crop science at UC Berkeley, UC Davis, California State University, Fresno and California Polytechnic State University, San Luis Obispo. He has authored more than 50 papers in refereed and grower-oriented journals and magazines and UC ANR publications.

❖ **MARIA de la FUENTE** is the Cooperative Extension director and a farm advisor in Santa Clara County. A former professor and dean of research, development and extension at Monterrey Tech in Mexico, she has worked with UC Cooperative Extension for the last five years. Her specialties are mushrooms and other edible fungi, alternative and specialty vegetable crops (Chinese vegetables, chile peppers, garlic), and nursery crops and cut flowers. Her research has been expanded to address critical concerns of urban-based clientele including economic development and environmental issues such as integrated pest management, water and soil management, and green waste reduction and use. She oversees the Master Gardener and 4-H programs.

❖ **MELANIE DuPUIS** is an assistant professor of sociology at UC Santa Cruz, where her specialties include food and agriculture, the environment, technology and policy. Her professional interests include organic food and consumer social movements. Her book *Nature's Perfect Food: Milk and American Identity* will be published in the fall.

❖ **LUCRECIA FARFAN-RAMIREZ** is the Cooperative Extension director and health and community development advisor in Alameda County. She is responsible for the county's Child and Youth Nutrition Program, which includes the Youth Expanded Food and Nutrition Program, Food Stamp Program, Nutrition Education and Training Academy, 5 A Day Power Play, Nutri-Link, and food security programs. She also serves as member of the Alameda County Maternal and Childcare Board, Food Security Advisory Committee of West Oakland, and other Healthy Start task forces and committees. Lucrecia is actively involved in linking research and practice in the area of agriculture and nutrition, particularly addressing the need of low-income communities through ecological models like food security, edible gardens, and farm-to-school lunch programs.

❖ **WILLIAM HORWATH** is a professor of soil biogeochemistry in the Department of Land, Air and Water Resources at UC Davis. Before coming to Davis he spent three years as a soil microbiologist with the USDA-ARS in Corvallis, Oregon doing research on composting on-farm wastes and the influence of riparian areas on water quality. Currently he teaches introductory soil science, nutrient cycling and management and organic chemistry of soil. His research is directed at understanding how soils store carbon or organic matter in both agriculture and forest ecosystems; results address the issue of soil carbon credits and the sustainability of practices leading to soil carbon sequestration. These relate to the potential of using alternative management strategies in California agriculture and forestry systems to store soil carbon and mitigate the effect of rising atmospheric carbon dioxide levels on global climate change.

❖ **JIM OLTJEN** is a management systems specialist in the animal science department at UC Davis. He is conducting research on animal production systems including projects on improved grazing systems, and modeling the growth and composition of beef cattle. His special interest is modeling the effects of alternative scenarios on resource use and production. He previously served on SAREP's Technical Advisory Committee from 1992-95.

❖ **PHIL OSTERLI** has been the Cooperative Extension director in Stanislaus County for the last 15 years, focusing primarily on water quality and land use issues. He spent the first 15 years of his career as a farm advisor specializing in row crops. A native Californian, he received degrees in agronomy from UC Davis.

❖ **JOHN PHILLIPS** is a professor of agronomy in the crop sciences department at California Polytechnic State University, San Luis Obispo. His areas of expertise include small grains and garbanzo production, agricultural experimentation, Holistic Management, and precision farming. He is particularly interested in sustainable agriculture and farmland preservation. He is also a licensed California Agricultural Pest Control Advisor.

**Continuing PAC/TAC**

**Program Advisory Committee:** Tess Dunham, Mark Lipson, Scott Paulsen, Frank Tamborello and Diego Vasquez.

**Technical Advisory Committee:** Edie Allen, Ted Bradshaw, Holly Brown-Williams, Rachel Mabie, Mike Stanghellini and Cheryl Wilen. Biographies of continuing PAC/TAC members appeared in the winter issue of *Sustainable Agriculture* ([Vol. 12, No. 1](#)).

### **Retiring PAC/TAC**

The following advisory committee members have rotated off the PAC or TAC: Bob Bornt, Frank Dawley, Debra Denton, Jeff Dlott, Tim O'Neill, Randii MacNear, An Peischel, Jim Rider, Beth von Gunten, Ernst Biberstein, Carlos Murillo, Doreen Stabinsky, Carolyn Stull, and Jo Ann Wheatley. UC SAREP is very appreciative of the work that advisory committee members do for the program.

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**Technical Reviews**

# **Consolidation in Food Retailing and Dairy: Implications for Farmers and Consumers in a Global Food System**

*Mary Hendrickson, William Heffernan, Philip Howard and Judith Heffernan*

National Farmers Union, Denver, Colorado. 2001

Over the last decade, it has become clear that the consolidation in the food system will likely be organized around five or six global food chain clusters and will extend to retail markets [see “[Consolidation in the food and agriculture system](#),” reviewed in *Sustainable Agriculture* Summer 2000 (Vol. 12, No. 2)]. Horizontal integration, vertical integration and globalization are the three major processes driving this consolidation. This article describes these trends in the retail and dairy sectors and outlines the implications and questions such trends raise for farmers and consumers.

## **Retail sector players**

In the last three years, rapid consolidation through horizontal integration (where similar retail firms acquire each other) has occurred in the retail sector. Today, Kroger, Albertson’s, Wal-Mart, Safeway and Ahold USA account for 42 percent of retail food sales in the United States. In 1997, the top five food retailers had only 24 percent of the market. Vertical integration, which formally connects retailers back to the production and processing stages, has also accounted for an important part of these firms’ strategies. Kroger, for example, has beef supply agreements with Excel (Cargill) while Stop and Shop (Ahold USA) has a dairy agreement with Suiza Foods. Wal-Mart obtains meats from IBP, Farmland and Smithfield.

Kroger is currently the number one retailer in the United States, after acquiring Fred Meyer in 1999. It is estimated that 10 cents of every supermarket dollar in this country is spent at a Kroger store. Kroger’s sales of beef and pork products tie it to the Monsanto/Cargill food chain cluster.

Wal-Mart is now the second largest food retailer in the United States and has caused considerable concern among its competitors due to its large size and its ties to dominant food chain clusters. It is also a key player on the global level. It has major operations in the United Kingdom and an important presence in Germany, Argentina, Brazil, Canada, Mexico, China and Korea. The perceived threat of a Wal-Mart monopoly on a global level was so great that two French retailers, Carrefour and Promodes, announced their merger as a way to cope with Wal-Mart. This French merger created the second largest retailer in the world. The Dutch firm, Royal Ahold (parent firm to Ahold USA) is not far behind with about 28 percent of the Netherland’s food retail market and operations worldwide, especially in Latin America, Eastern Europe, Sweden, Norway and China. Some analysts have predicted that in the near future, only



about six global food retailers will control the retail sector. Wal-Mart, Carrefour, Ahold and Tesco (UK) are likely contenders.

As financial control shifts to retailers, away from manufacturers, the smaller entities—farmers, small-scale processors and consumers—are being left out. Retailer fees (slotting allowances, display fees, presentation fees, pay-to-stay fees and failure fees), which account for as much as 50-75 percent of total net profits for large retailers, prevent smaller processors and farmers from getting into the system. Food system consolidation also impacts consumers and communities when retailers cease to locate in inner urban and rural areas.

## **U.S. dairy sector**

For most of its history, the dairy sector was not affected by the restructuring going on in the rest of the food system because it was organized through local and regional cooperatives which were the dominant milk processors. The dairy sector was already vertically integrated from production through processing and distribution and even through retail stages due to well-established, local brand names. The cooperatives allowed dairy farmers to remain in control of the system and cushioned them from non-farm processors which had begun to dominate other commodity sectors. Even up to ten years ago, investor-owned processors in the dairy sector also operated on a local level with well-known brand names in their communities. However, the emerging horizontal integration that is rapidly occurring in the dairy sector today suggests that this sector too will soon follow the patterns of the other sectors, to the detriment of dairy producers.

With the exception of Philip Morris' (Kraft) dominance in the cheese segment, the market share concentration by the four largest firms in the dairy sector is fairly low—35 percent (Dean Foods, Suiza Foods, Kroger and Prairie Farms). Three major factors are forcing major changes in the dairy sector, however. First is the concentration in the retail sector. The retail sector is now in a position to process their own dairy products (through their acquisitions of certain dairy processors) so they can begin challenging dairy processing firms for market share. The retailers want to establish national brands, which will require huge supplies of product across the country.

The second force is the growing direct involvement of transnational firms. Nestle, Unilever and Philip Morris, the three largest food processors in the world, continue to expand their acquisitions in the dairy sector. The third force is the horizontal integration that has occurred in the last few years with investor-owned firms and cooperatives forming joint ventures and acquisitions. The management unit is becoming blurred.

Changes in the dairy sector underscore how retailer dominance presents challenges for farmers, processors and consumers. As retailers grow ever larger, they are able to develop relationships with dominant food manufacturers, effectively shutting out the smaller wholesalers, processors, retailers and producers. As retailers begin dictating terms to food manufacturers, food manufacturers begin to serve their interests rather than the interests of farmers.

## **Implications for producers, consumers & alternative food systems**

In the final analysis, the authors ask, “Who has power in the manufacturing/retail channel?” Even as the power shifts towards retailers, smaller entities are left out. Smaller farmers, processors and retailers might see these trends as an opportunity to join forces and create new relationships that build the infrastructure for alternative food systems. These new systems could help farmers capture more of the food dollar while simultaneously encouraging the development of small processing businesses that are the backbone of many rural communities.

On the other hand, the authors caution that while cooperatives at one time provided dairy farmers with an alternative, they are now struggling to survive. They have always faced capitalization problems and will continue to struggle with their relationships with investor-owned firms. As transnational cooperative relationships emerge, it is unclear how the small family farmer will be treated.

The organic industry provides many U.S. farmers with another new, alternative market, allowing them to compete in the global marketplace. However, it cannot be denied that as the organic industry has grown, it has begun to mirror the horizontal and vertical integration of the conventional food system rather than creating new relationships that enhance communities economically, ecologically and socially. Not only is consolidation in the organic sector occurring in supermarkets, but also in dairy. For example, Suiza Foods has a 13 percent stake in Horizon Dairy, one of the largest organic dairies in the U.S.; Dean Foods recently bought Alta Dena, another major organic dairy processor.

The authors conclude that the food system remains dynamic. Although the short-term trends of horizontal and vertical integration are clear, this is probably unsustainable in the long-term. First, in several cases the FTC has already stepped in to stop supermarket consolidation. This could signal further antitrust actions in the future. Second, the U.S. balance of trade in agricultural exports is declining and imports are increasing. Although the U.S. may be one of the most efficient producers, it is no longer the low-cost producer due to our integration of health and environmental regulations. The loss of U.S. farmers makes little difference to transnational corporations, according to Steven Blank in his book *The End of Agriculture in the American Portfolio*. Hendrickson et al., ask whether the loss makes a difference to American farmers and consumers. The trends are becoming more apparent and consumers are now beginning to experience direct economic impacts through higher prices at supermarkets or lack of access to any supermarket. Because everyone must eat to live, food is a necessity and therefore a different kind of commodity than virtually any other good or service. The question is whether the public thinks making decisions about what food is produced, who produces it, where and under what conditions it is produced, and who gets to eat it, is ultimately important. If so, conclude the authors, public policies that address social and cultural aspects of food production and consumption, environmental costs and food security at community and national levels, may be required.

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National Farmers Union, 11900 East Cornell Ave., Denver, CO 80014.

Web site: [www.nfu.org](http://www.nfu.org)

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Contributed by Gail Feenstra

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## **Resources**

### **Print Publications**

#### **Farmscaping for Biological Control**

*Farmscaping to Enhance Biological Control*, 38 pages, December 2000, **Rex Dufour**, Appropriate Technology Transfer for Rural Areas (ATTRA).

Available in print, HTML or PDF formats. This publication summarizes practical ways to attract beneficial insects to farms by raising cover crops or flowers as habitat, shelter, and food. It includes tables, resources, and useful Web links. HTML and PDF Web versions are available on the ATTRA Web site at: [www.attra.org/attra-pub/farmscape.html](http://www.attra.org/attra-pub/farmscape.html); [www.attra.org/attra-pub/farmscaping.pdf](http://www.attra.org/attra-pub/farmscaping.pdf). For print copies contact ATTRA, PO Box 3657, Fayetteville, AR 72702; Tel: (800) 346-9140; Fax: (501) 442-9842.

#### **Ag/Forestry Resource Guide**

*Building Better Rural Places: Federal Programs for Sustainable Agriculture, Forestry, Conservation and Community Development*, 160 pages, Appropriate Technology Transfer for Rural Areas (ATTRA), January 2001. This guide provides descriptions and contact information for 80 federal programs that offer support to farmers and others seeking technical assistance, information, or financial resources. Aimed at farmers, land managers, entrepreneurs, community developers, and conservationists, the guide also is designed to help federal agency employees take better advantage of the programs and resources available to support agricultural and forestry innovations. The guide resulted from a collaboration of individuals from USDA agencies, compiled with the Michael Fields Agricultural Institute in Wisconsin. HTML and PDF Web versions are available on the ATTRA Web site at:

[www.attra.org/guide/index.htm](http://www.attra.org/guide/index.htm). For a free printed copy of *Building Better Rural Places* contact ATTRA, PO Box 3657, Fayetteville, AR 72702; Tel: (800) 346-9140; Fax: (501) 442-9842.

#### **Fertilizer Program Proceedings**

*Proceedings, 8th Annual Fertilizer Research and Education Program Conference, November 14, 2000*, 119 pages. Sponsored by the California Department of Food and Agriculture, California Fertilizer Association, California Certified Crop Adviser Program. Since 1991, CDFA's Fertilizer Research and Education Program (FREP) has funded projects that promote the environmental and agronomic use of fertilizing materials. The 2000 FREP conference presented new efforts to improve nutrient management, protect water sources, and improve growers' economic viability. The proceedings includes project summaries on: advancing fertility and water management in cotton, tomatoes, trees and vines, rice, sweet corn; updates on regulatory efforts on non-nutritive metals; certified nutrient management plans; precision agriculture for the San Joaquin Valley; nutrient/pest interactions; fertilizer application calendars as they relates to air quality issues; and other topics. Copies of the proceedings are available at no cost by contacting CDFA's FREP office at 1220 N Street, Room A-427, Sacramento, CA 95814; Tel:

(916) 653-5340; Fax: (916) 653-2407; Email: [ccady@cdfa.ca.gov](mailto:ccady@cdfa.ca.gov). The proceedings are available on the Web at [www.cdfa.ca.gov/inspection/frep/conference\\_proceedings.html](http://www.cdfa.ca.gov/inspection/frep/conference_proceedings.html).

### **Ag Profit Essay Collection**

*Hungry for Profit: The Agribusiness Threat to Farmers, Food, and the Environment*, 220 pages, Monthly Review Press, 2000, edited by **Fred Magdoff, John Bellamy Foster**, and **Frederick H. Buttel**. A collection of essays from a special issue of Monthly Review, which offer historical analysis and an overview of the issues surrounding the global “commodification” of agriculture. Contributors address growing public concern over food safety and agricultural biotechnology. *Hungry for Profit* also examines the extent to which environmental, social, and economic problems are intertwined with the structure of global agriculture. It highlights the ways in which farmers and farmworkers are working to create “a just and environmentally sound food system.” Contributors include Magdoff, Foster, Buttel, Ellen Meiksins Wood, William Heffernan, Miguel Altieri, R. C. Lewontin, Gerad Middendorf, Mike Skladny, Elizabeth Ransom, Lawrence Busch, Philip McMichael, Farshad Araghi, Linda C. Majka, Theo J. Majka, Elizabeth Henderson, Janet Poppendieck, Peter M. Rosset, and William Hinton. Order through local bookstores or contact Monthly Review Press at (800) 670-9499. Cost: \$19 paper, \$45 cloth.

### **GM Crop Monitoring**

*Ecological Monitoring of GM Crops*, National Academy Press. Full text of the report and purchasing information available at: <http://books.nap.edu/catalog/10068.html>. This public workshop was held July 13-14, 2000 in response to a request from USDA; its focus was on monitoring approaches for ecological effects of genetically modified crops.

### **Web Sites**

#### **California Sustainable Agriculture Working Group**

<http://www.calsawg.org>

The California Sustainable Agriculture Working Group (SAWG) is an active network dedicated to promoting a sustainable and socially just food system. SAWG’s 23 member organizations include farm, environmental, consumer, farmworker, and other groups. SAWG provides a forum for collaborative action, policy advocacy, and information exchange. It has a successful track record in forging links between diverse constituencies and winning policy changes that increase support for organic and sustainable agriculture.

## Resources

# Farm-to-School Programs

*Farm-to-School Programs Healthy Farms, Healthy Kids: Evaluating the Barriers and Opportunities for Farm-to-School Programs*, 62 pages, 2001, **Andrea Misako Azuma** and **Andrew Fisher**, UC SAREP. School lunch isn't just pizza and french fries anymore. Food service departments at schools across the country are joining forces with parents, teachers, community activists, and farmers to create new opportunities for healthy student lunch offerings while simultaneously supporting small farmers within their region. These farm-to-school programs usually include the following:

- Salad bars stocked with farmers' market fruits and vegetables;
- Recipes integrating appropriate seasonal, regionally grown produce;
- Farmer cooperatives supplying produce directly to school districts;
- Farmers selling produce directly to schools using an innovative program of the Department of Defense and the USDA.

*Healthy Farms, Healthy Kids*, funded by a grant from SAREP, describes seven farm-to-school projects from around the country, providing useful information to help start local projects. It examines the barriers and opportunities surrounding the programs including childhood obesity, the struggles of family farmers, and the changing school food environment that may include fast food and soft drinks in the lunchroom. The report also provides an analysis of federal policies related to nutrition and local food systems. To order, send a check for \$12 plus \$4 shipping/handling to CFSC, PO Box 209, Venice CA 90294. For information about credit card orders contact Fisher by phone at (310) 822-5410, Fax: (310) 822-1440 or Email: [asfisher@aol.com](mailto:asfisher@aol.com).

## Resources

# Organic Materials Lists

Generic Materials List, Brand Name Products List, fourth editions, Organic Materials Review Institute (OMRI). OMRI offers recommendations and opinions on the acceptability or unacceptability of generic materials and specific (brand name) products used in organic production, processing, and handling. The lists are compiled by OMRI staff and other industry experts and are available to individuals, organizations, companies, certifiers, and state/province programs as part of an annual subscription that includes updates and industry news. Brand Name Products List is also available on-line at [www.omri.org](http://www.omri.org). The lists are useful for organic certifiers auditing organic farming and processing practices under provisions of the new national organic standards. Generic Materials List contains information on more than 700 substances, including: status (allowed, regulated, or prohibited); class (fertilizer, livestock health care, processing production aids); restrictions or qualifications; applicable recommendations by the U.S. National Organic Standards Board; comparison of status of crops and processing materials lists from the International Federation of Organic Agriculture Movements (IFOAM) and OMRI. Brand Name Products List includes more than 450 brand-name materials evaluated using OMRI's own standards, cross-referenced to generic materials. The USDA released its final version of national organic standards in December 2000, and USDA's National Organic Program will become the oversight agency for the organic industry. Before summer, OMRI will review the rule and make changes to the OMRI 2001 lists, if any, that will be needed to comply with the federal program, which is expected to have an implementation deadline by fall 2002. To subscribe to the OMRI lists or to apply for a product review, contact OMRI, Box 11558, Eugene, OR 97440 USA, (541) 343-7600, Fax (541)343-8971, [info@omri.org](mailto:info@omri.org), [www.omri.org](http://www.omri.org).

## Sources of Funding

### SAREP/UC IPM Meeting Grants

SAREP, in collaboration with the UC Statewide Integrated Pest Management Project (IPM), has released Requests for Proposals (RFPs) for grants to support workshops, field days, symposia, and seminars that take place between August 1, 2001 and June 30, 2002. Grants of up to \$1,500 will be awarded for events addressing these topic areas: integrated pest management in agricultural or urban settings, organically acceptable pest control methods, biologically based alternatives to methyl bromide, agroforestry practices, or promoting the development of community food systems. These grants are available to individuals affiliated with California public or private educational institutions, non-profit, tax-exempt organizations, or state or federal government agencies. Participation of UC Cooperative Extension in proposals is encouraged. Proposals are due **May 22, 2001**. Awards will be announced by July 15, 2001. Current RFPs are posted on SAREP's Web site at [www.sarep.ucdavis.edu/grants/request.htm](http://www.sarep.ucdavis.edu/grants/request.htm). The site also describes events funded in previous funding cycles. For more information or to receive a paper copy of the RFP, contact SAREP grants manager **Bev Ransom** at (530) 754-8546; [baransom@ucdavis.edu](mailto:baransom@ucdavis.edu).

### SAREP Biologically Integrated Farming Systems (BIFS) Grants

SAREP expects to announce a Request for Proposals (RFP) for BIFS projects this spring. These grants will be available to individuals and institutions based in California to lead large, collaborative demonstration projects on biologically integrated management of field crops, row crops, orchards, vineyards or livestock. Awards typically range from \$50,000 to \$100,000 per year. This RFP will be posted on SAREP's Web site at [www.sarep.ucdavis.edu/grants/request.htm](http://www.sarep.ucdavis.edu/grants/request.htm). The site also provides links to descriptions of previously funded BIFS projects. For more information or to receive a paper copy of the RFP, contact SAREP grants manager **Bev Ransom** at (530) 754-8546; [baransom@ucdavis.edu](mailto:baransom@ucdavis.edu).

### USDA Fund for Rural America

More than \$30 million in loans and grants to expand research, education and development in rural U.S. cities is now available through the USDA's Fund for Rural America. Approximately \$10 million will be offered in competitive research, education, and extension grants that help promote the creation of local rural development strategies, including but not limited to establishing biomass and ethanol information sharing and market development programs. The remaining \$20 million will go to USDA programs which promote business and economic development, outreach to socially disadvantaged farmers, and cooperative development, as well as natural resource and conservation efforts. Up to \$600,000 will be available for proposals that address rural community vitality and increased economic development,



including locally owned value-added processing facilities. The program also seeks projects addressing issues dealing with demographic changes in rural America, including the aging of rural America, the role of new immigrants in the workforce, and youth retention and workforce development. Colleges, universities, and private research organizations will be eligible for funding through the Cooperative State Research, Education, and Extension Service. The full Request for Proposals is available at [www.reeusda.gov/fra/](http://www.reeusda.gov/fra/). Deadline for submitting applications is **June 19, 2001**.

## **Food, Ag Systems Grants**

The Cooperative State Research, Education, and Extension Service (CSREES) is requesting grant proposals for the Initiative for Future Agriculture and Food Systems Program (IFAFS) for fiscal year 2001 to support research, extension and education grants addressing key issues of national and regional importance to agriculture, forestry, and related topics. The amount available for support is approximately \$113,400,000. Project proposals and proposals for Multidisciplinary Graduate Education Traineeship Grants must be received by **April 23, 2001**. Critical or Emerging Issues proposals must be received by **June 1, 2001**. Applicants may email a Letter of Intent to **Rodney Foil** at [rfoil@reeusda.gov](mailto:rfoil@reeusda.gov) or send the letter by mail to IFAFS, Mail Stop 2213, CSREES, U.S. Department of Agriculture, 1400 Independence Avenue, S.W., Washington, D.C. 20250-2213; or fax the Letter of Intent to IFAFS at (202) 690-3858. The address for express mail or hand-delivered proposals is IFAFS, c/o Proposal Services Unit, CSREES, U.S. Department of Agriculture, Room 1307, Waterfront Centre; 800 9th Street, S.W., Washington, D.C. 20024. Proposals sent via U.S. mail must be sent to Initiative for Future Agriculture and Food Systems, c/o Proposal Services Unit, CSREES, U.S. Department of Agriculture, STOP 2245, 1400 Independence Avenue, S.W., Washington, D.C. 20250-2245. For more information, contact Foil or **Sally Rockey**, Tel: (202) 401-1761, Email: [srockey@reeusda.gov](mailto:srockey@reeusda.gov).

## **USDA Grants for Value-Added Ventures**

USDA Rural Development has made \$25 million in grants available for the development of agricultural producer-owned processing businesses. The new Value-Added Agricultural Product Market Development Grants program is designed to encourage independent producers of agricultural commodities to process their raw products into marketable goods, thereby increasing farm income. Of the total amount, \$5 million will be awarded to establish a pilot project, "The Agricultural Marketing Resource Center." The remaining \$20 million will go to help associations of independent producers establish value-added business ventures. The maximum allowable grant amount is \$500,000, and grant recipients must provide one-to-one matching funds. Grant applications for this purpose will be accepted in two rounds. Applications for the first round must be received by 4 p.m. Eastern Time, **April 23, 2001**. The deadline for the second round is 4 p.m. Eastern Time, **June 27, 2001**. Nonprofit corporations and institutions of higher learning are eligible to apply to establish the Agricultural Marketing Resource Center. All applications for this grant must be received by 4 p.m. Eastern Time, **April 30, 2001**. This program is administered by USDA's Rural Business Cooperative Service. Further information is available at USDA Rural Development state offices, or at the following Web site: [www.rurdev.usda.gov/rbs/coops/vadg.htm](http://www.rurdev.usda.gov/rbs/coops/vadg.htm)

## Organic Research Grants

The Organic Farming Research Foundation (OFRF) invites applications for research grants of up to \$10,000 for consideration in its twice-yearly funding cycle. Funds are offered for organic farming research, dissemination of research results to organic farmers and growers interested in making the transition to organic production, and consumer education on organic farming issues. OFRF technical program coordinator **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 ([www.ofrf.org](http://www.ofrf.org)) under "research program" or can be ordered free of charge by calling OFRF at (831) 426-6606. The deadlines for proposal consideration are **January 15** for the spring funding cycle and **July 15** for the fall funding cycle. Contact Sooby at OFRF, PO Box 440, Santa Cruz, CA 95061 or email [research@ofrf.org](mailto:research@ofrf.org) or [jane@ofrf.org](mailto:jane@ofrf.org)

## SAREP conserves resources with RFP announcements via Web, email

Recognizing that a majority of Californians now have access to email and the Web, SAREP will no longer mail paper copies of its RFPs to everyone on the mailing list. Instead, RFP announcements are being posted on SAREP's Web site and announced via email. Individuals wishing to receive a paper copy of any SAREP RFP should contact SAREP office manager, **Linda Fugitt** at (530) 752-7556; [lfugitt@ucdavis.edu](mailto:lfugitt@ucdavis.edu).

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## **Calendar**

### **\* SAREP WEB CALENDAR**

SAREP offers a sustainable agriculture calendar at: [www.sarep.ucdavis.edu/](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 [www.agnic.org](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, [reggie@cruzio.com](mailto:reggie@cruzio.com).

## **APRIL**

**24** *Alternatives for Vinerow Weed Management-Tailgate Meeting*, Monterey County. Sponsors: Central Coast Vineyard team members, Calif. Dept. of Pesticide Management. Host growers demonstrate equipment, discuss management strategies, Positive Point System practices. Loma Vista Vineyards, 38405 Elm Avenue, Greenfield, site of farm advisor Larry Bettiga's weed management demonstrations. 9:45 am-12:00 p.m. Hosts: Daryl Salm, Rich Smith, Valley Farm Management. Reservations: (805) 462-9431; [info@vineyardteam.org](mailto:info@vineyardteam.org)

## **MAY**

**5-9** *California Grazing Academy/Low-Stress Livestock Handling School*, Davenport, Calif. Sponsor: UC Cooperative Extension, Placer /Nevada counties. Hands-on experience. Topics: controlled grazing, pasture & range ecology, range nutrition, supplementation, fencing design, grazing planning. Livestock handling features Bud Williams' techniques: step-by-step training, flight/pressure zones, sorting, placing animals without fences; horses & dogs. Swanton Ranch, 125 Swanton Road, Davenport. \$295 includes meals, lodging, course materials. Contact: Roger Ingram, (530) 889-7385, [rsingram@ucdavis.edu](mailto:rsingram@ucdavis.edu).

**23-24** *Finding the Right Blend: Land Use Planning, Environmental Regulation & the Wine Industry*, Villa Chanticleer, 1248 N. Fitch Mountain Road, Healdsburg. Both days 8:30 a.m.-5 p.m. Explores issues faced by California wine industry re: land use and environmental regulations. See: <http://universityextension.ucdavis.edu/landuse/wineconf.html>

## **JUNE**

**9-10** *Mushrooms & Permaculture Seminar*, Davis Bynum Winery, 8075 Westside Road, Healdsburg, CA 95446. Co-sponsor: Sonoma Permaculture. Cost: \$275 for both days, Sat. only \$175, Sun. only \$125. How to integrate mushroom cultivation into permaculture gardens & land restoration projects. Features mushroom experts, permaculturists, cooks. Information: [www.sonic.net/mycoperm](http://www.sonic.net/mycoperm)

**26 & 28** *Conservation Tillage 2001: Equipment & Technology Demonstration Conferences*, Five Points, CA & UC Davis, sponsored by UC Cooperative Extension. Tues., June 26 in Five Points or Thurs., June 28 in Davis; 9 a.m.-3 p.m. both sessions. Field demos of equipment for conservation tillage, recent research information, farmer/researcher panels, practical "how-to" information. 4 hours PCA, 4 hours CCA credit requested. \$10 pre-registration due June 1; \$15 day of event. Lunch/proceedings included. Contact: Jeff Mitchell, UC veg crops specialist, (559) 646-6565, Fax: (559) 646-6593; [mitchell@uckac.edu](mailto:mitchell@uckac.edu)

## **OCTOBER**

**2-3** *Living on the Land: A Conference for Agricultural and Natural Resource Educators*, Reno, Nevada. Aimed at ag & natural resource educators from extension, NRCS, resource conservation districts. Introduction to an educational resource package/curriculum aimed at helping small acreage landowners manage their land more sustainably. Contact Holly George, (530) 283-6262, [hageorge@ucdavis.edu](mailto:hageorge@ucdavis.edu).

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