



Agricultural Issues Center

2004 ANNUAL REPORT

University of California
Division of Agriculture and Natural Resources

ORGANIZATION

The Center consists of a director, several associate directors, a small professional staff and an Advisory Board.

The Board, made up of leaders from the agricultural community and other public sectors, helps determine the Center's agenda and provides policy guidance for its programs. The associate directors, chosen from UC research and extension personnel, lead our efforts in particular program areas.

In a sense, the "staff" of the AIC includes the entire UC faculty and more. When issues have been selected for study, researchers from across the UC system and representatives of government and industry are invited to help design and carry out the effort. Center projects may involve 50 or more individuals for a year or two, with the Center coordinating study groups and providing support.

MISSION

Because of today's more intense competition for resources, continuing environmental concerns and broader global linkages, public policy decisions impacting California agriculture are more complex than ever before. The UC Agricultural Issues Center's mission is to provide broadly-based and objective information about these issues and their significance for California's economy and natural resources.

For 19 years, the Center has served as a forum where important and often controversial trends and issues involving California agriculture—ranging from water transfers to international trade—have been identified, studied and debated. The Center makes its findings available to policymakers, to government agencies, to interest groups and to individuals through a continuing series of conferences, workshops, in-depth and popular publications, videos and its website.

Significant financial support for the Center comes from (1) the state appropriation established at the Center's inception, (2) supplemental funding from the UC Division of Agricultural and Natural Resources, (3) extramural grants for specific projects, and (4) an endowment currently being built through gifts from individuals, foundations and corporate donors.

PRIORITIES

International trade and globalization of agriculture.

Advances in productivity and technology in agriculture.

Linkages between natural resources, the environment and agriculture.

Rural-urban interactions, particularly land use issues.

Agricultural personnel and labor issues.

Commodity market and agribusiness issues.



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DIRECTOR'S MESSAGE

The University of California Agricultural Issues Center is a small unit that focuses on producing useful research on practical public issues. To make significant contributions we attract outside funds and leverage our resources by developing collaborations with colleagues across the University of California, at other universities and with other institutions. AIC has pursued this strategy of collaboration since its inception in 1985.

Recently, we have developed strong working relationships with colleagues at the Center for Agricultural Business (CAB) at California State University, Fresno and the California Institute for the Study of Specialty Crops (CISSC) at California Polytechnic State University, San Luis Obispo.

In addition to our informal working relationships on many projects, in 2004 we conducted research on three funded projects with CAB at Fresno State. These included evaluating market prospects of the California grape juice concentrate industry, studying the growing role of product traceability in agricultural marketing, and developing and disseminating risk management information to specialty crop growers.

With CISSC at Cal Poly, we developed baseline information on California's agricultural invasive species programs. We also studied the importance of nutrition information and nutrition improvements for California agriculture, evaluated food safety testing and regulation for pistachios, and analyzed the competitive challenges and opportunities presented by Chinese horticultural supply and demand. This last project allows us to build on long standing collaborations with the China Center for Agricultural Policy in Beijing.

Our most important set of collaborations outside the University of California is associated with our participation in the Agricultural Marketing Resource Center (AgMRC). The AgMRC is a USDA funded program conducted in partnership with Iowa State University Cooperative Extension, the Center for Agriculture and Rural Development at Iowa State, and Kansas State University. Using AgMRC funding, we have worked with colleagues at Oregon State University, Pennsylvania State University and the University of Kiel in Germany.

In all of these cases, AIC personnel have identified issues of particular importance to our core mission for which outside funding sources might be secured. We have then found colleagues from within the University of California or elsewhere who could best contribute expertise to meeting our research and outreach objectives. We have been fortunate that so many extraordinary individuals have been willing to work with us and that we have been able to achieve a shared research vision for approaching key issues.

This annual report provides some broad overviews of AIC's major efforts in 2004. As usual, more details are on our website.

Daniel A. Sumner

BOARD CHAIR COMMENTS

In 2004, the Agricultural Issues Center continued to conduct a variety of research and outreach programs serving California agriculture. This report highlights programs on agricultural pests, international trade, water and other natural resources, nutrition and risk management among others. These studies indicate there are significant economic opportunities for California agriculture and that efforts are underway to overcome current and future challenges. For example, one AIC study suggests that shifts in consumer diets toward more healthy eating patterns can also contribute significantly to a healthier agriculture in California.

Within the University, budget issues remain a concern as the State of California continues to deal with ongoing deficits. All parts of the budget, including the University of California, are under pressure. Fortunately, the University reached an accord with the Governor which stemmed the tide of budget reductions and, hopefully, placed the University on better footing in future budget years. With continued support from University leadership, I am hopeful that AIC can plan for the future starting with stability in its core budget.

With a small core budget and so many important issues, one of the biggest challenges facing AIC is to set priorities on which issues it will take on. The Advisory Board has a role in helping the Center in finding resources and with outreach, but our major role is working with the AIC director and staff to decide which issues should be at the top of the agenda. This is a tough task, but one that I and my fellow board members understand is important. We also gain personal satisfaction when we see AIC contributing important research-based information to the public forum.

Daniel M. Dooley

PROGRAMS 2004

Multi-pronged effort tackles invasive weeds

A cost-benefit analysis for controlling giant reed (*Arundo donax*), salt cedar (*Tamarix*), and yellow starthistle (*Centaurea solstitialis*) estimates economic benefits of changes in rangeland productivity and water availability from controlling these three invasive weeds.



Yellow starthistle

The analysis considers four scenarios: doing nothing, control using a biological agent, spot control in sensitive areas using chemicals, and combined spot and biological controls. One potentially significant economic effect is how these plants change the water availability in watersheds they densely inhabit

The AIC work by Karen Jetter and Karen Klonsky is part of a multistate, multi-agency project to manage invasive plant species that are affecting agriculture and native ecosystems in several western states. Long-term goal of the project is the development and implementation of an ecologically sound and sustainable approach to management of these invasive species.



Arundo



Salt cedar

Production input expenses project continues

Subcontracts to develop cost and return studies for the USDA Risk Management Agency to use in developing crop insurance products have been completed with several states, including Colorado, Arizona, Washington, Minnesota, Montana, New Jersey, New York, and Michigan. A third round of subcontracts is being conducted in 2005.

Animal disease management focus continues

The economics of animal disease management continues to be an area of focus for the AIC. José Bervejillo and Daniel Sumner have monitored the subject since the first case of BSE (mad cow disease) appeared in the United States in December 2003. The economic impact of this first case of mad cow disease in the U.S. and the implications of the new federal regulations on the livestock industry were assessed.

An article, "Public Policy, Invasive Species and Animal Disease Management," (Sumner, Jarvis and Bervejillo) was prepared and appeared in the January 2005 issue of *International Food & Agribusiness Management Review*. The same three authors also contributed a chapter on the role of public policy in animal disease in the book, *The Economics of Livestock Disease Insurance: Concepts, Issues and International Case Studies*, being published by CAB International. An article, "International Beef Prices: Is There Evidence of Convergence?" (Jarvis, Cancino and Bervejillo) was prepared for an upcoming issue of the *Review of Agricultural Economics*.

PROGRAMS 2004

Pest control payoff evaluated

A model linking pest management costs to agricultural benefits in California was developed using data collected in cooperation with the California Department of Food and Agriculture and the USDA Animal and Plant Health Inspection Service

Pest control expenditures were collected and analyzed for pest exclusion, detection, eradication, and containment/suppression or management. The data are summarized in the revised *Measure of California Agriculture*.

The project was funded by the California Department of Food and Agriculture and included California Polytechnic University, San Luis Obispo.

2030 will more than offset food production losses associated with urbanization in California until at least 2030.



German visitors hosted

The AIC organized and hosted a UC Davis visit by members of the German Bundestag and the German Consul General interested in biotechnology, consumer education, and related public policies. Discussions included North American regulation, including labeling, of genetically modified organisms; biotech horticultural research, and consumer attitudes; and nutrition education.

California agriculture growth expected to continue

An AIC report, "Future Food Production and Consumption in California Under Alternative Scenarios" by Henrich Brunke, Richard Howitt and Daniel Sumner, predicts that technology-led increases in production between 2001 and

The value of California's food production, boosted by technological advances and climate change, is expected to grow by about 58 percent between 2001 and 2030, despite continued loss of agricultural land to urbanization. Production would have to increase by 46.5 percent to feed the state's population and maintain California's contribution (approximately 8.2 percent) to the rest of the nation's food supply. The projected growth in production by 2030 would allow California's foreign exports to increase by about two percent.

Educational programs help producers manage risk

Classes, workshops and online education helped ranchers and growers develop strategies to handle financial and other risks associated with farming. The overall program, funded by a USDA Risk Management Agency Agreement with the AIC, also involved AIC contracts with

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the Center for Agricultural Business at CSU Fresno and a private Davis-based firm, Farm & Agriculture Collaborative Training Systems (FACTS).

FACTS organized and conducted workshops that focused on helping farm families, particularly those in business less than 10 years or those having annual gross receipts under \$250,000, develop tolerance profiles and strategies for dealing with family/personal, financial, production, marketing and legal/regulatory risks. The one-day workshops were held in Watsonville, San Luis Obispo, Carmarillo, Escondido, Tulare, Fresno, Stockton, Petaluma, Ukiah, Eureka, and Chico

A conference, "Plant or Pull: The Economic Outlook for Tree Crops," in Yuba City focused on economic and agronomic issues facing the major crops in the area—walnuts, almonds, prunes and cling peaches. An AIC-developed model to help farmers and ranchers to use risk analysis on long run time scales was shared with the 157 conference participants. A second conference, "Solutions for Today's Farmers," in Kelseyville focused on grower options for expanding and diversifying their income in a region with many small fruit and vegetable farms. The two-day program had 125 participants, including 85 producers.

The AIC also supported a survey of California specialty crop producers to determine their risk management needs and a statistical analysis of producer decisions to use risk management tools.

Other 2004 work under the project included creating a website, <http://www.calriskmgmt.org>, and a pilot online course for tree fruit and nut producers, both developed at CSU Fresno. The course includes illustrative spreadsheet templates, materials presented at the on-site risk management courses and workshops and links to other risk management sources.

FACTS also offered a series of 10-week courses on business planning and management skills for cow-calf and hay ranchers in northeastern California during the fall of 2003.

Model estimates economics of antibiotic resistance in livestock

Estimates of the cost of illness associated with antibiotic resistant infections of *Salmonella* and *Campylobacter* were completed by Julian Alston and David Kennedy using data on the prevalence of foodborne disease, levels of antibiotic resistance, and medical literature indicating that antibiotic resistance cases of *Salmonella* and *Campylobacter* result in greater morbidity and mortality. These preliminary estimates indicate that total costs associated with antibiotic resistance can be quite large. However, reducing the prevalence of bacteria produces greater cost savings than reducing antibiotic resistance. Further work in this area will focus on accounting for the variability and uncertainty that exist with most of the model parameters.

The model takes into account the implications of reduced antibiotic resistance, including interactions among farmers faced with higher rates of infection in their livestock as a result of reduced antibiotic use and the market response of beef, pork, and poultry products, since some consumers would pay a premium for antibiotic-free products.

Chinese market for California wine explored

The AIC has teamed up with California's wine industry leaders to learn more about the production, consumption and marketing of wine in China and the potential for marketing California wines in China. The research is exploring consumer preferences, transportation systems, import barriers, and Chinese production and technology. It includes surveys, interviews with Chinese government officials and industry representatives, and a trip to China by growers, vintners and marketers associated with the California Association of Winegrape Growers (CAWG), the Wine Institute and other wine industry groups.

The research is supported by a USDA Emerging Markets Program grant awarded to the CAWG, which is working with the AIC, the Wine Institute and a select group of other industry representatives to conduct the study. Scott Rozelle, Daniel Sumner, and Kurt Richter are contributing for AIC. We are also drawing on efforts in China from the China Center for Agriculture Policy

A study by the Wine Institute in 2000 found that from 1996 to 2000 the annual per capita wine consumption in China increased from 0.25 liters to 0.44 liters. Although these consumption numbers are small when compared to per capita consumption of 6.72 liters annually in the rest of the world, China could consume nearly 20 percent of the U.S. wine production by the end of 2005 if its rate of consumption continues to increase at the level indicated by the Wine Institute study.

Healthy eating benefits California producers

California growers would shift crops to meet the increased demand and could increase their earnings by \$316 to \$836 million a year if Californians increased their consumption of fruits and vegetables to USDA-recommended levels for healthy and cancer prevention diets, an AIC study completed in 2004 shows.

California growers would receive \$316 million more in annual income if all Californians consumed five servings of fruits and vegetables, the minimum amount recommended by the USDA for a healthy diet. Eating seven servings a day recommended by the USDA for active adults would boost the additional annual income figure to \$788 million. A recommended cancer-prevention diet of seven fruit and vegetables servings that emphasizes fruits high in vitamin C, dark green and deep orange vegetables, tomatoes and cruciferous vegetables such as cauliflower and broccoli would boost the additional income figure to \$836 million.

Growers in the rest of the United States also would benefit, but not to the extent that California producers would because many of the crops that would have the greatest increases in demand, such as lettuce, broccoli and processed tomatoes, are grown primarily in California.

The study by Karen Jetter, AIC research economist, Daniel Sumner, AIC director, and James Chalfant, chair, UC Davis Department of Agricultural and Resource Economics, examines the direct economic benefits and costs of California consumers adopting four alternative recommended diets: 1) the very minimum 5-a-day recommendation for fruits and vegetables, 2) the 5-a-day commodity subgroup recommendations for a cancer prevention diet, 3) the 7-a-day minimum recommendation for men and active women, and 4) the 7-a-day

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commodity subgroup recommendations for a cancer prevention diet.

Although the study focuses on the direct economic consequences from changes in quantities demanded and supplied and on price responses, it also examines how changes in fruit and vegetable consumption might affect the use of the land, labor and water resources used in farm production. It does not analyze the health consequences of these dietary changes.

The authors note that, despite the known health benefits, many people do not eat enough fruits and vegetables. In some cases the difference between actual and recommended consumption is quite large. Based on data from the California Survey of Dietary Practices, the consumption of dark green and orange vegetables by people in low-income households (less than \$15,000 annually) would need to increase by 307 percent in order to achieve the recommended levels in the 7-a-day cancer prevention diet. Households earning more than \$15,000 annually would need a 275 percent increase.

Details are available in an AIC Issues Brief (No. 27, Aug. 2004), "Does 5-a-day Pay? The researchers are expanding the study to estimate the effects on fruit and vegetable

Healthy food choices cost more

Healthier choices in the USDA Thrifty Food Plan market basket can increase the cost of that basket by 33 percent, a study by Karen Jetter and Diana Cassady shows. The market basket that incorporates healthier alternatives includes such foods as canned fruits in "lite" syrup, lean meats, nonfat or one percent fat milk, and whole wheat bread.

Most of the cost difference for the healthier products is due to brand availability and size. The healthier items are often only sold as name brands or in smaller packages, making them more expensive than generic brands or products sold in larger packages. Pound for pound, low-fat ground meat and skinless poultry are more expensive than their higher fat alternatives.

The researchers have launched another study to examine how such factors as availability and price influence the choice to purchase healthier food items in family style restaurants and small grocery stores in low-income neighborhoods.

AgMRC enhances value-added agriculture

The Agricultural Marketing Resource Center (AgMRC), a collaborative effort among the AIC, Iowa State University and Kansas State University to enhance research and information delivery about value-added agriculture began its fourth year in October.



Funded initially 2001 by a three-year, \$5 million grant through the Rural Business-Cooperative Service of the U.S. Department of Agriculture, the grant allowed any unspent money to be used in year four. The 2002 Farm Bill added \$4 million to the original grant. As part of their participation, collaborating institutions were required to provide matching funds.

The AIC has concentrated on research in value-added agriculture, as well as the preparation of nontechnical materials, including a series of commodity profiles, for posting on the AgMRC website (www.AgMRC.org).

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Australia-U.S. free trade agreement effects on milk prices are small

An analysis of the effects of an Australia-U.S. free trade agreement on U.S. milk markets indicates that increased imports from Australia resulting from bilateral trade liberalization will create virtually no change in U.S. milk prices and production.

The agreement, negotiated in February 2004, increases Australia's low-tariff access to the U.S. market for certain agricultural commodities. In the case of dairy, the United States agreed to expand Australian access gradually through a preferential tariff rate quota.

AIC-affiliated economists Julian Alston, Daniel Sumner, Joseph Balagtas (now at Purdue University) and Henrich Brunke developed the analysis on the effects of the agreement.

Endowment dinner features WTO talk

Stanford University economist and international trade expert Tim Josling updated AIC board members and friends on World Trade Organization (WTO) negotiations and issues at the center's annual endowment dinner in November.

Josling reviewed the status of trade negotiations including the World Trade Organization and such bilateral agreements as the Central American free trade and Australian free trade agreements, among others. He said that, despite delays and controversies, there will be an agricultural trade agreement in the WTO, although results are at least 18 months to two years away.

Although agricultural tariffs will be cut, with highest tariffs coming down the most, the

cuts won't be enough to satisfy those hoping to achieve free trade, but they will provide substantial additional access into currently restricted markets, Josling said. He added that farm subsidies in Europe, Asia and the United States will be reduced, mainly through WTO negotiations rather than through dispute settlements. The timing of the reduced subsidies may well correspond with adjustments the United States is making anyway in response to budget pressures facing the 2007 Farm Bill.

The annual dinner provided opportunity for a select group of California's agricultural leaders to become better acquainted with AIC programs and to discuss a current topic important to California Agriculture.

Conference explores options for local farmers

Options for supporting local agriculture—such as agritourism, crop diversification, organic production, staying ahead of culinary trends and forming marketing partnerships—drew more than 120 medium- and small-scale specialty crop growers and food marketing and processing professionals to the "Solutions for Today's Farmers" conference in Lake County.

Topics to help growers boost their income covered risk management, international trade and competition, marketing trends, value-added products, becoming certified, creative marketing strategies, new market and distribution channels, agritourism and ecotourism, culinary trends and marketing to restaurants, marketing to institutions, developing production and marketing partnerships, and local resources for getting help with business ideas.

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Survey provides insight to California horticulture production

The most comprehensive statistical profile ever produced on California's specialty crop industries is providing insight to industry practices, sources of risk and responses to risk.

The study, by UC Davis agricultural economists Hyunok Lee and Steven Blank, collected data from approximately one-third of all horticultural crop producers in the state.

Among their findings:

- There are relatively few very large farms and many very small farms. Average land holding by vegetable growers, 1,106 acres, far exceeded 157 acres for fruits and nuts and 200 acres for ornamental crops.
- Crop diversification is much less common for orchards than for vegetable farms. About 70 percent of fruit/nut farmers were single-crop growers compared to 26 percent for vegetables. Among the diversified farms, 80 percent of fruit/nut farms were diversified among only fruit/nut crops, whereas only one-third of vegetable farms were diversified among only vegetable crops.
- Primary crop acreage increases with crop diversification for fruit/nut crops and for vegetable crops. Farms growing five or more vegetables were, on average, four times larger in vegetable acreage than farms growing a single vegetable crop.
- Six percent of specialty crop farmers have some organic (or transitional-organic) land.
- California producers are highly specialized. Most fruit/nut farms produced

mainly for processing use (71%) and most vegetable farms produced mainly for fresh use (67%). Only 7 percent of specialty crop farmers supplied both processing and fresh market outlets.

- In processed-use markets, contracts played a major role (used by 57% of fruit/nut farmers and 88% of vegetable farmers), and contracts with a predetermined price were most prevalent.

- Prices as well as profits tend to fluctuate less for vegetables than fruits/nuts.

- Adverse temperature and output price fluctuation are the most important perceived sources of risk. Input price fluctuation, pests and disease were considered to be moderately important risks.

- About 53 percent of orchard and vineyard farmers, 31 percent of vegetable farmers and 13 percent of ornamental crop farmers said they had purchased crop insurance in the last five years. Most who bought insurance said that they purchased it for all five years.

- Crop insurance was a preferred risk management tool by orchard and vineyard farmers, and crop diversification was preferred by vegetable and ornamental crop farmers. Diversified marketing was reported to be the second most preferred tool for all crop categories

The economists suggest that, while no one risk management tool emerged as being a "silver bullet," study of the varying approaches to risk management by different commodity groups may help produce improved and new approaches to risk management for specific crops.

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Future of horticultural biotechnology explored

The April-June 2004 *California Agriculture* magazine published by the UC Division of Agriculture and Natural Resources was devoted to horticultural biotechnology issues, many of which surfaced at a conference cosponsored by the AIC in 2002.

In a guest editorial for the magazine, AIC director Dan Sumner noted that social and economic issues surrounding agricultural biotechnology include the payoff to investments in agricultural science, agricultural productivity growth, farm incomes, food costs, global hunger, dietary improvements, agricultural profitability, competitive positions of regions and commodities, intellectual property rights, international trade, international regulations, environmental consequences, and food quality and safety.

California Agriculture (<http://calag.ucop.edu/>) discusses these issues in the context of horticultural crops from the perspectives of scientists, economists, industry and government experts, and others.

Advisory Board

William F. Allewelt, Vice Chair

Allewelt is president emeritus of Tri-Valley Growers and was chair of the UC Agricultural Issues Center Advisory Board at its beginning in 1985. He is a native Sacramentan, attending UC Davis before graduating in agricultural economics at UC Berkeley. His career in food processing began with appointment as general manager of Turlock Cooperative Growers which later merged to form Tri-Valley Growers. Active in industry affairs and volunteer activities with public higher education, he served on the founding board of CoBank and as chair of the Commission on Agriculture and Higher Education.

Karen Caplan

Karen Caplan is president and CEO of Los Angeles-based Frieda's Inc. The daughter of entrepreneur Frieda Caplan, she has increased the corporation's annual sales significantly since taking over as president in 1986, pioneering in quality control and merchandising of exotic fruit and vegetable products. A leader in the produce industry, she was the first female president of the Los Angeles-based Fresh Produce and Floral Council in 1991. In 2004, Caplan completed her term as the first woman chair of the United Fresh Fruit & Vegetable Association, a national trade association. She was named "Produce Person of the Year" in 2004 by Vance Publishing. She has served on the boards of the UC Davis Institute of Governmental Affairs, the UC Davis Cal Aggie Alumni Association, and is serving a three-year term as director of the Los Angeles branch of the Federal Reserve Bank Board in San Francisco. She earned a Bachelor of Science degree in agricultural economics and business management at UC Davis.

Dan Dooley, Chair

Daniel M. Dooley is a partner in the Visalia law firm of Dooley, Herr, Carlson & Peltzer and is city attorney for Visalia. He is admitted to the California and District of Columbia Bar Associations and is licensed to practice before the U.S. District Court, Eastern District of California. He is a member of the American Bar Association, Section on Natural Resources, Environmental, and Energy Law. Dooley has served as Chief Deputy Director of the California Department of Food and Agriculture, chair of the California Water Commission, and vice-chair of the National Agricultural Research, Extension, Education and Economics Advisory Board to the Secretary of the U.S. Department of Agriculture. He is an executive committee member of the National Council for Agricultural Research, Extension and Teaching; a Farm Foundation Bennett Agricultural Roundtable member; vice-chair of the Farm Foundation Board of Trustees; chair of the UC President's Advisory Commission on Agriculture and Natural Resources; and immediate past chair of the Board of Trustees of Children's Hospital of Central California. Dooley is a recipient of the Award of Distinction from the College of Agriculture and Environmental Sciences at UC Davis and a member of the U.S. Department of Agriculture's Cooperative State Research, Extension and Education Service Research Hall of Fame. He is a graduate of the California Agricultural Leadership Program, has a degree in agricultural economics from UC Davis and a law degree from the University of Pacific.

Advisory Board

Cornelius L. (Corny) Gallagher

Cornelius (Corny) Gallagher is senior vice president and agribusiness executive for Bank of America. He leads a national team that provides agricultural appraisal services, identifies agribusiness industry risks and, opportunities and establishes portfolio strategies. He is the bank's key agricultural representative in dealing with government agencies and elected officials on agribusiness issues. Gallagher serves on numerous state and national agricultural leadership boards and committees, including chair of the California Bankers Association and the national Risk Management Association Agricultural Lending Committees. Gallagher is a part owner of his family's seven-generation Iowa farm where he was born and raised. He graduated from Iowa State University with a B.S. degree in animal science.

Betsy Marchand

Marchand served six terms on the Yolo County Board of Supervisors, retiring in 1996. Her special interests and activities include water, land use, and transportation issues as well as criminal justice and health issues. Marchand is president of the State Board of Reclamation, appointed by the Governor in 2001. She is also a tribal gaming commissioner for the Cache Creek Casino/Resort, fire commissioner for the Rumsey Rancheria Fire Department, and a founding board member of the Yolo Basin Foundation. A member of a pioneer California family, she received a B.A. from Pomona College (Phi Beta Kappa) and a M.A. degree from Vanderbilt University, where she studied as a Ford Foundation Fellow. Marchand has taught high school English and social studies in both Southern California and Northern California.

Milenda Meders

A native Californian and a lifelong rancher, Meders manages a family field/row crop and almond operation and, with her husband, a cow-calf operation in the Central Valley. She graduated from California State University, Fresno, after majoring in dairy husbandry with minors in biology and journalism. She is active in numerous farm and community organizations and advisory groups, is director of the Madera County Cattlemen's Association, and has been livestock director of the Chowchilla County Fair and a board member of the Chowchilla Water District. A founder of Friends of Agricultural Extension, she continues to lead this nonpolitical support group in Fresno and Madera Counties.

Michael J. Mendes

Michael J. Mendes has served since 1997 as president and chief executive officer of Diamond of California, the nation's leading processor and marketer of culinary and in-shell nuts. Before joining Diamond, Mendes managed the international marketing and sales division of the Dole Food Company, where he introduced Dole dried fruit and nuts to the European and Asian markets. Prior to working with Dole, he was a consultant to several California food companies, developing international marketing plans for the produce and packaged food industries and implementing trade activities, primarily in the Pacific Basin. Mendes received a master's degree in business administration from the University of California, Los Angeles. He serves on the President's Advisory Council of the Grocery Manufacturers of America (GMA) and the Executive Council of the National Council of Farmer Cooperatives (NCFC), and was appointed in 2003 to the board of directors of the California Chamber of Commerce. He has been a member of the NorCal Young Presidents' Organization chapter since 1998.

Advisory Board

Brenda Jahns Southwick

Southwick began her professional career as a legal counsel and legislative advocate for the Bureau of Reclamation in Washington, DC. She developed water law as her specialty. She transferred to California where she continued her work in water law, also drafting federal legislation on California water issues. She spent several years developing a water specialty for the law firms of Landels, Ripley, and Diamond and for Nossaman, Guthner, Knox and Elliott. Prior to joining the California Farm Bureau Federation's Legal Division where she works on water issues in the Department of Environmental Advocacy, she was a deputy attorney general for the State of California.

Dorcas Thille McFarlane

Owner/operator of J.K. Thille Ranches and a fourth generation farmer, Dorcas Thille grows avocados, lemons and vegetable/flower seeds in Ventura County. She serves as a board member of Calavo and the Saticoy Lemon Association, as president of a local water commission board, and has been on the advisory board of the Hansen Trust since its inception in 1993. She is a member of UC President Atkinson's Advisory Commission on Agriculture.

Rominger appointed UC Alumni Regent

Former AIC advisory board member and former U.S. deputy secretary of agriculture Richard Rominger resigned from the AIC board to accept a two-year term as an alumni representative on the UC Board of Regents. Rominger, who earned his bachelor's degree at UC Davis, has served as director of the California Department of Food and Agriculture, and board member for the Cal Aggie Alumni Association, and the UC Davis Foundation. Appointments of alumni regents are selected by their home campus alumni for a two-year term and rotate among the 10 campuses of the University of California system.

Director

Daniel A. Sumner
Commodity Policy and Market Issues
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Daniel A. Sumner is the director of the University of California Agricultural Issues Center and the Frank H. Buck Jr. Chair Professor in the Department of Agricultural and Resource Economics at UC Davis where he has been since 1993.

Sumner was raised on a fruit ranch in Solano County, California. He has a B.S. from California Polytechnic University, San Luis Obispo, an MS from Michigan State University and a Ph.D. in Economics from University of Chicago. Sumner was on the Economics faculty of North Carolina State University for a decade before spending several years on leave in government service. He was a senior economist on the President's Council of Economic Advisers and Assistant Secretary for Economics at the U.S. Department of Agriculture in 1992 and early 1993.

Sumner is a Fellow of the American Agricultural Economics Association and former Chair of the International Agricultural Trade Research Consortium. His research and writing has won American Agricultural Economic Association awards for Quality of Research Discovery, Quality of Communication, and Distinguished Policy Contribution.

In addition to his role as AIC director, Sumner teaches courses in microeconomics and agricultural policy and conducts research and outreach on a variety of agricultural economics topics. Recent research includes impacts of international trade negotiations on liberalization of markets for rice and dairy and the effects of trade on food security in developing countries.

Associate Directors

Julian M. Alston
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Julian M. Alston is a professor in the Department of Agricultural and Resource Economics of the UC Davis. He teaches graduate and undergraduate classes in microeconomic theory and the analysis of agricultural markets and policies.

Prior to beginning his current position in 1988, Alston was chief economist in the Department of Agriculture in Victoria, Australia, where he had been employed in various capacities since 1975. His experience in public policy analysis and advice, and in administration of a large scientific organization has shaped Alston's research interests in the economic analysis of agricultural markets and public policies concerning agricultural incomes, prices, trade, and agricultural research and promotion. Along with many articles in professional journals, he is a coauthor of two recent books: *Making Science Pay: The Economics of Agricultural R&D Policy* and *Science under Scarcity: Principles and Practice for Agricultural Research Evaluation and Priority Setting*.

Alston was raised on the family farm in northern Victoria, Australia. He has a Bachelor's degree in Agricultural Science from the University of Melbourne in 1974; a Master's degree in Agricultural Economics from La Trobe University in 1978; and a PhD in Economics from North Carolina State University in 1984.

Associate Directors

Colin A. Carter
International Trade
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Colin A. Carter has been a professor in the Department of Agricultural and Resource Economics at UC Davis for 12 years, after serving as a professor at the University of Manitoba. His research investigates problems related to agricultural policy and trade, with a focus on grain markets in the Pacific Rim. He has written extensively on state trading enterprises in grains. Carter has studied the internal grain economy in China and China's participation in the international market. From 1986-89, Carter held a fellowship in international food systems from the Kellogg Foundation. Along with scores of professional journal articles, chapters and reports, Carter has coauthored several books, the topics of which include China's grain markets, futures markets, and U.S. agricultural policy.

Carter was raised on a grain farm in Alberta, Canada, and received his B.S. and M.S. degrees from the University of Alberta. His PhD in agricultural economics is from UC Berkeley in 1980.

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Agricultural Environmental Management
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Karen Klonsky has been a specialist in Cooperative Extension in the Department of Agricultural Economics at the University of California at Davis since 1981. Her interest in alternative farming systems began with her dissertation work comparing alfalfa management systems with and without integrated pest management. Since then she has done extensive research into the economic feasibility of alternative and organic

farming practices for field crops, vegetables, and tree crops collaborating on a range of interdisciplinary research projects. Her interest in organic agriculture led her to analyze the growth and structure of organic farm production in California over the last decade.

Since 1983 Dr. Klonsky has directed the development of cost and return studies for the major crops in California through UC Cooperative Extension and the Department of Agricultural and Resource Economics. The studies are distributed worldwide and are now available through the department web page. Klonsky serves as an editor for the Journal of the American Society of Farm Managers and Rural Appraisers. She has a PhD in agricultural economics from Michigan State University and an undergraduate degree in mathematics from the University of Michigan.

Keith Knapp
Resources and the Environment
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Keith Knapp was born in Wichita, Kansas, and raised in Minnesota, Illinois and Iowa. He received a B.S. in Economics from Iowa State University in 1972. After two years of military service, his educational career resumed at Johns Hopkins University where he received a PhD from the College of Engineering in 1980, specializing in resource and environmental economics. He has been with UC Riverside since September of 1980. He is currently professor of resource economics and resource economist in the Department of Soil and Environmental Sciences at UC Riverside.

Professor Knapp teaches four courses in resource and environmental economics at the undergraduate and graduate level. He has conducted research on irrigation management, salinity and drainage problems in the San

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Joaquin Valley, renewable resource management with an emphasis on groundwater, agricultural markets (grain reserves and perennial crops), and the implications of exhaustible resources for economic growth. Current research interests are generally the economics of natural resource use and environmental quality as related to irrigated agriculture with an emphasis on water management.

Scott D. Rozelle
China Programs
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Dr. Rozelle received his B.S. from UC Berkeley, and his M.S. and Ph.D. from Cornell University. He is a member of the American Economics Association, American Agricultural Economics Association, International Association for Agricultural Economists, Asian Studies Association and Association of Comparative Economics. Professor Rozelle has received numerous honors and awards in recognition of his outstanding achievements. He is the UC Davis 2000 Chancellor Fellow, an award given each year to one of the university's outstanding faculty members.

Recognized as one of the leading economists in the U.S. with expertise on China's large and important agricultural sector, Rozelle is fluent in Chinese and has established a research program based on a knowledge and appreciation of China. He is the chair of the International Advisory Board of the Center for Chinese Agricultural Policy.

Dr. Rozelle's research focuses almost exclusively on China and is concerned with three general themes; a) agricultural policy, including the supply, demand, and trade in agricultural projects; b) the emergence and evolution of markets and other economic institutions in the transition process and their implications for

equity and efficiency; and c) the economics of poverty and inequality. In the past several years his papers have been published in top academic journals, including *Science and the American Economic Review*.

Jerome B. Siebert
Agribusiness Issues
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Jerry Siebert is an emeritus economist in the Department of Agricultural and Resource Economics, University of California, Berkeley. Prior to this assignment, he was Director of U.C. Cooperative Extension. In addition to his academic experience, he has held positions in both business and government. In the latter assignments, he was special assistant to four U.S. Secretaries of Agriculture. He also has a farming background on a family farm in Madera, California.

His work centers on research and education involving the impacts on California agriculture of changes in public policies affecting production and marketing of California agricultural commodities. In particular, he analyzes the use of market mechanisms to evaluate the potential economic effects of changes in public policy. His current focus is the role of technology in California agriculture and changes needed in industry and research institutions to facilitate the development and application of agricultural biotechnology. He is also an active participant in a Russian project to facilitate the transfer of technology in a market economy.

In addition to his work at the University of California, he is an "ex-officio" member of the California State Consolidated Farm Services Committee, a public member on the California Walnut Commission and chairman of the Walnut

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Marketing Board, president of the San Francisco Farmers Club, and a member of the Board of Directors of the International Agribusiness Management Association.

Alvin D. Sokolow
Rural/Urban Interactions
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Alvin D. Sokolow is a Public Policy Specialist with UC Cooperative Extension, housed in the Department of Human and Community Development on the Davis campus. Formerly a professor of political science at Davis for 27 years, his research and extension activities deal with issues and processes of community and state governance. He has published 72 journal articles, monographs and other reports. Current and recent work concentrates on farmland and land use policy in California, state-local public finance, and politics and policy in small communities. Sokolow has been a key participant in AIC projects since 1989, including the Williamson Act, Central Valley, and urban-agricultural edge projects. He is the editor of the Center's series, California Farmland and Open Space Policy.

A Chicago native, Sokolow's degrees from the University of Illinois are: undergraduate in Journalism, and M.A. and PhD in Political Science. He has taught at Western Michigan University, Michigan State University, and the University of Illinois, and has been a visiting scholar at Montana State University and Miami University.

In addition to his farmland publications at the Agricultural Issues Center, Sokolow is author of the California Policy Seminar CPS brief, Farmland Policy in California's Central Valley: State, County, and City Roles.

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Financial Statement 2004

Income

Permanent Funds (Base Budget) 2003-2004	236,025
Benefit Augmentation on Base-budgeted Salaries	17,022
Publication Sales & Conference Support	4,793
Grants, Contracts and Collaborative Research: 2004 awards	
USDA/Cornell University Sub-award	11,500
California Avocado Commission	11,307
CSU Fresno Sub-award	41,000
California Department of Food and Agriculture	25,000
CSU Fresno Sub-award	22,300
Grants, Contracts and Collaborative Research: 2003 awards and continuing awards from prior grants	
* Agricultural Marketing Research Center - Iowa State Sub-award	196,562
* USDA Risk Management Education	317,322
** RMA Partnership Agreement	520,317
Giannini Mini-Grant	5,669
Total Income	1,408,817

Expenses

Salaries	543,541
Sub-award to CSU-Fresno for Risk Management Education	68,560
Sub-award to FACTS for Risk Management Education	131,504
Sub-awards -RMA Partnership Agreement	37,780
Supplies & Expenses	85,560
Equipment	3,880
Future Commitments in Contracts and Grants	537,992
Total Expenses	1,408,817

* Prorate for implied 2004 income for projects that extend over more than one calendar year. Total awards are for substantially higher amounts.

** This total reflects the remaining funds from a multiyear grant.

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2004 ANNUAL REPORT

**University of California
Division of Agriculture and Natural Resources**