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The breadth and scope of the projects undertaken by the University of California Agricultural Issues Center continue to grow. This annual report catalogs the variety of projects in which we were engaged in 2002 and reviews some of the products prepared under those projects. There is too much going on at AIC to summarize in this brief message, so instead let me mention some of the context for our work.

Despite the variety of activities, the AIC is a small organization that accomplishes much of its work by leveraging resources and contributions from many parts of the University. In these stringent budget times, it is useful to review sources of support for AIC work. However, I want to acknowledge at the outset that much of what we accomplish at AIC is contributed by University faculty and staff that are not paid out of AIC funds at all. This begins with our associate directors and advisory board, but extends much further to include stakeholders and cooperators from many organizations.

Historically, our program of research, outreach and extension education has been supported by two allocations from the University of California Office of the Vice President for Agriculture and Natural Resources (ANR) and from competitive grant funds garnered from government and nongovernment sources that support specific projects. The allocation from ANR is associated with the original AIC allocation and with the allocation for work in the Agricultural Personnel Management Program, which is now a fully integrated part of the AIC. The AIC uses these ANR funds to support our core programs and salaries for both staff and academics, including our Cooperative Extension County advisors who work on agricultural labor and personnel issues.

A few years ago the AIC began to increase the share of work that is funded with outside grants. This has allowed the AIC to better serve its mission by drawing on additional sources of support. During 2002, grant funds helped us expand our work on global food security, links between food demand, nutrition and agriculture, farm worker health and safety, international trade, farm risk management, exotic pests and value-added markets as a way to increase returns to agriculture.

The other source of support for AIC programs is the endowment that we began to build a few years ago. That fund now has close to one-half a million dollars in funds and commitments and will be a growing contributor to the AIC in the future.

Dan Sumner
California agriculture faces myriad issues ranging from adapting to an ever-increasing population to biotechnology to international trade. During the past year, the AIC has contributed to the knowledge base and helped shape public policy on these and other closely related issues. Many of those contributions are chronicled in this annual report.

The work of the AIC, with its limited resources, is an example of how public investment in agricultural social and policy science R&D pays handsome dividends for society. More concrete evidence is available for investments in biological and physical sciences and engineering. In every study the rates of return are large. Despite a large societal payoff, it is becoming increasingly difficult to build the needed support for devoting public resources to agricultural research and extension. Authorization for some additional federal investment was included in the 2002 Farm Bill, but the federal R&D funds remain inadequate as more dollars are devoted to direct transfers that do much less for longer-term competitiveness of agriculture.

Here in California, as well as in other states, the situation is dire. The huge, proposed cuts in the permanent budget for agricultural research and extension amount to a drastic reduction in investments. Strong evidence suggests that just the opposite should be happening. Society should be increasing its investment in this area to insure long-lasting benefits worth many times the original investment. Measured rates of return of 20 percent or more are common.

AIC Associate Director Julian Alston’s research and analyses has established even more precisely the nature of the R&D contribution to agriculture, the overall economy in California, and to global welfare. The soon to be published book by John Mullen, Julian Alston and several coauthors, *Returns to University of California Pest Management R&D: Overview and Case Studies Emphasizing IPM*, adds another significant piece of documentation supporting the argument for increased investment, not less.

In closing, I would like to mention another type of investment—an investment in service, and acknowledge founding AIC Advisory Board member Henry Schact, who retired from the board in 2002 after 15 years of service. Henry was instrumental in helping guide the Center during its formulative years and molding it into a position of respect and credibility among California’s producers, policy makers, and agribusiness leaders. Thank you, Henry.
OUR MISSION

With 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 broad-based and objective information about these issues and their significance for California’s economy and natural resources.

For 16 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.

OUR 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.

OUR 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 1999, the UC Agricultural Personnel Management Program became a unit of AIC.

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. Major projects have focused on such issues as:

■ Chemicals in the human food chain.
■ Growth and change in the Central Valley.
■ Irrigation water transfers from two Northern California counties.
■ Animal agriculture’s impacts on water quality.
■ Maintaining viable agriculture at the urban edge.
■ Exotic pests and diseases of plants and animals in California.

Other Center activities have ranged from “competitive edge” studies of agricultural industries to development of a better system for estimating California’s farm exports.

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 Agriculture and Natural Resources, (3) extramural grants for specific projects, and (4) an endowment currently being built through gifts from individuals, foundations and corporate donors.
William F. Allewelt, Vice Chair

Allewelt is president emeritus of Tri-Valley Growers and has been chair of the UC Agricultural Issues Center Advisory Board since 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 an 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.

Dan Dooley, Chair

Dooley’s law firm represents many agricultural and water interests in the San Joaquin Valley, including public irrigation and water districts, private ditch companies, river associations, joint powers authorities, and farmers. He also serves as the city attorney for Visalia and as chair of the UC AIC advisory board. Dooley has served as chief deputy director of the California Department of Food and Agriculture and as chair of the California Water Commission. He has also served on the National Council for Agricultural Research, Extension and Teaching; the Special Trade Representative’s Agricultural Technical Advisory Committee for Trade for Cotton; and as president of the Visalia Chamber of Commerce, as well as a member of the board of directors; and as chair of the Children’s Hospital Central California.

Karen Caplan

Caplan is president and CEO of Los Angeles-based Frieda’s Inc. The daughter of entrepreneur Frieda Caplan, she has led the corporation to significant sales and market share levels. The company is considered the leading marketer and distributor of specialty produce in the United States, 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 & Floral Council and is presently the first female chair of the Washington, D.C. based United Fresh Fruit & Vegetable Association. She has served on the boards of the UC Davis Institute of Governmental Affairs and the UCD Cal Aggie Alumni Association, and now serves on two advisory committees to Agriculture Secretary Ann Veneman. She earned her B.S. degree in agricultural economics and business management at UC Davis.

Cornelius L. (Corny) Gallagher

Corny is senior vice president and national agribusiness executive for Bank of America. He is the bank’s food products industry portfolio manager and the key spokesperson regarding industry issues. He is currently chair of the California 4-H Foundation Board, the California Bankers Association Agricultural Lending Committee, and the Risk Management Association’s Global Ag Lending Committee. Gallagher also chairs the California State Fair Agricultural Advisory Council. He is a member and past chair of the Cal Poly San Luis Obispo School of Agriculture Advisory Council.

He serves on the California Chamber of Commerce Agriculture Committee, the California Agricultural Roundtable, and the California Food and Fiber Future Advisory Board. He has served on the Food Foresight Blue Ribbon...
Strategy Trends Panel for the past five years. Corny is an Iowa farm boy. He graduated from Iowa State University with a B.S. degree in animal science before joining the Bank of America in 1969.

Betsy Marchand
Marchand served six terms on the Yolo County Board of Supervisors. Her special interests and activities include water and transportation issues, criminal justice, health care, and mental health care. Currently, she is special program coordinator for the Yolo County Flood Control and Water Conservation District. She is also director of government relations for the FamiliesFirst, Inc. organization. A member of a pioneer California family, she received a B.A. degree from Pomona College (Phi Beta Kappa) and an M.A. degree from Vanderbilt University, where she studied as a Ford Foundation Fellow. Mrs. Marchand has taught high school English and social studies in both Southern California and Northern 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 the Calavo Avocado Marketing Cooperative and the Saticoy Lemon Cooperative, 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.

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.

Richard E. Rominger
Richard E. Rominger is a fourth generation California farmer who has grown about 20 different field and row crops. A summa cum laude graduate of UC Davis in plant science, he currently serves as Advisor on Production Agriculture to four university campuses: UC Davis, UC Riverside, California State University, Fresno and California Polytechnic State University, San Luis Obispo. He is on the board of the American Farmland Trust and a member of the University of California President’s Commission on Agriculture and Natural Resources.

He served eight years as the Deputy Secretary of the U.S. Department of Agriculture and six years as Secretary of the California Department of Food and Agriculture. He and his wife Evelyne reside near Winters on the family farm now operated by their daughter and three sons.

Henry Schacht
An agricultural consultant and writer, Schacht graduated from UC Berkeley and began his career with the news media. He was director of agriculture for NBC and ABC in San Francisco where his morning broadcast was recognized as among the nation’s leading farm programs. He is probably best known for his twice-weekly Farm Reporter column which appeared for many years in the San Francisco
Chronicle. He has had broad international experience in agriculture, including special assignments on behalf of the U.N. Food and Agricultural Organization and service as a member of the Agricultural Policy Advisory Committee during the Tokyo Round of international trade negotiations.

Brenda Jahns Southwick

Jahns Southwick began her professional career as a legal counsel and legislative advocate for the Bureau of Reclamation in Washington, D.C., developing water law, as her specialty. She transferred to California and continued work in water law 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 Natural Resources and Environmental Division as managing counsel, she was a deputy attorney general for the State of California. At CFBF she works on farming concerns involving land, water, and air resources in administrative, legislative, and litigation forums.

Daniel A. Sumner is the Frank H. Buck, Jr. Chair Professor in the Department of Agricultural and Resource Economics and the director of the University of California Agricultural Issues Center. Sumner focuses particularly on agricultural commodity policy and related issues.

Raised on a fruit farm in the Suisun Valley, he was active in 4-H and Future Farmers of America (FFA). He was the Star State Farmer for California in his final year in FFA.

Sumner holds a B.S. degree in agricultural management from California Polytechnic University in San Luis Obispo, an M.S. degree from Michigan State University and a Ph.D. in economics from the University of Chicago.

From 1978 to 1992, Sumner was a professor in the Division of Economics and Business at North Carolina State University. He spent much of the period after 1986 on leave for government service in Washington, D.C. where he served on the President’s Council of Economic Advisers and at the U.S. Department of Agriculture as Assistant Secretary for Economics.
Julian M. Alston  
**Science and Technology**  
*e-mail*: julian@primal.ucdavis.edu

Julian M. Alston is a professor in the Department of Agricultural and Resource Economics at 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 B.S. degree in agricultural science from the University of Melbourne in 1974; an M.S. degree in agricultural economics from La Trobe University in 1978; and a Ph.D. in economics from North Carolina State University in 1984.

Colin A. Carter  
**International Trade**  
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Colin A. Carter has been a professor 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 Ph.D. in agricultural economics was from UC Berkeley in 1980.

Karen M. Klonsky  
**Agricultural Environmental Management**  
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Karen Klonsky has been a specialist in Cooperative Extension in the Department of Agricultural Economics at UC 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 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’s web page (http://www.agecon.ucdavis.edu/outreach/crop/cost.htm). Klonsky serves as an editor for both the Journal of the American Society of Farm Managers and Rural Appraisers and Choices. She has a Ph.D. in agricultural economics from Michigan State University and an undergraduate degree in mathematics from the University of Michigan.

Keith Knapp

Resources and the Environment
e-mail: keith.knapp@ucr.edu

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 Ph.D. from the College of Engineering in 1980, specializing in resource and environmental economics. He has been with UC Riverside since September 1980. He is currently professor of resource economics and resource economist in the Department of Soil and Environmental Sciences at UC Riverside.

Knapp teaches four courses in resource and environmental economics at the undergraduate and graduate levels. He has conducted research on irrigation management, salinity and drainage problems in the San 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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A professor in the Department of Agricultural and Resource Economics and fluent in Chinese, Rozelle is widely recognized as one of the world’s leading specialists on China’s agriculture. His research is concerned with three general themes: 1) agricultural policy, including the supply, demand, and trade in agricultural projects, 2) the emergence and evolution of markets and other economic institutions in the transition process and their implications for equity and efficiency; and 3) the economics of poverty and inequality. He has close working ties with several Chinese collaborators. He is the chair of the International Advisory Board of the Center for Chinese Agricultural Policy. His papers have been published in top academic journals, including Science, Nature, The American Journal of Agricultural Economics, The China Quarterly and the American Economic Review.

Rozelle has received numerous honors and awards in recognition of his outstanding achievements. In 2000, he was named a UC Davis Chancellor’s Fellow for his accomplishments and potential for further contributions. Rozelle received his B.S. degree from UC Berkeley and his M.S. and Ph.D. degrees from Cornell University.
ASSOCIATE DIRECTORS

2002

Jerry Siebert is an emeritus Cooperative Extension specialist in the Department of Agricultural and Resource Economics and Policy, UC Berkeley. Prior to his assignment as Cooperative Extension specialist, 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 has a farming background on a family farm in Madera, California.

His work centered 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 analyzed the use of market mechanisms to evaluate the potential economic effects of changes in public policy. He also focused on 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 an active participant in a project to facilitate the transfer of technology in a market economy in Russian and Romania.

He is currently serving as a public member on the California Walnut Commission and is chair of the Walnut Marketing Board. Since October 2002, he is serving as the Executive Director of the International Food and Agribusiness Management Association (IAMA), to which he had previously served on its Board of Directors.

Alvin D. Sokolow is a public policy specialist with UC Cooperative Extension, housed in the Department of Human and Community Development at UC Davis. 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 76 journal articles, monographs and other reports. His work concentrates on farmland and land use policy in California, state and local public finance, and politics and policy in small communities. He is director of the National Assessment of Agricultural Easement Programs, an AIC collaboration with the American Farmland Trust. Sokolow has been a key participant in AIC projects since 1989, including the Williamson Act, the California Central Valley Study, and was the editor of the Farmland and Open Space report series.

A Chicago native, Sokolow holds an undergraduate degree in journalism and M.A. and Ph.D. degrees in political science, all from the University of Illinois. 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.
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Associate director Alston continues to explore agricultural research policies and consequences

This set of studies on agricultural science policy and its consequences, is being conducted jointly with colleagues at the University of Minnesota, NC State University, Penn State University, UC Davis, and the International Food Policy Research Institute. This research has three main elements: 1) international comparisons of institutional arrangements and investments in agricultural research, 2) empirical studies of agricultural productivity patterns and their determinants, and 3) measurement of the benefits and costs of agricultural R&D and technological change.

Recent projects under this umbrella included measuring the benefits from corn-rootworm-resistant transgenic corn technology, measuring the benefits from pest management research conducted by the University of California, analyzing the benefits and costs of checkoff-funded programs, including agricultural research and generic commodity promotion programs. Results of this work were presented at a variety of meetings and published in both academic journals and books and more popular outlets. Alston’s presidential address, “Spillovers,” was presented at the Australian Agricultural and Resource Economics Society annual conference. The address also was published in the *Australian Journal of Agricultural and Resource Economics*.

**EU programs affect processing tomato markets**

Approximately one-third of world processing tomato production occurs in the European Union (EU). Like many other regions, the EU applies an ad valorem import tariff to all processed tomato products. However, unlike other regions, the EU applies export subsidies to specific processed tomato products, and directly supports the production of processing tomatoes. Furthermore, the domestic support applied to processing tomatoes in the EU changed in 2001. This project, led by Bradley Rickard, now an assistant professor at Cal Poly, San Luis Obispo, quantitatively examined the effects of switching EU domestic support regimes in the processing tomato industry.

Reducing import tariffs in all nations would increase shares of production and consumption of the processed tomato products that are produced (and exported) by the EU and United States, and decrease shares of products that are produced (and exported) by the rest of the world. Lowering import tariffs would increase production in the EU and United States, and as a result, increase the EU taxpayer cost associated with the domestic support. Reducing EU payments to tomato growers would decrease welfare for EU producers and increase welfare for EU taxpayers, but would not significantly change production or welfare in other regions. The shift in EU domestic support programs in 2001 stimulated additional EU production and increased overall trade distortions of the policy. The export subsidy is small and has negligible aggregate effects.

Presentations based on this project were made at the Ontario Processing Vegetable Industry Conference in London, Ontario; the World Tomato Congress in Istanbul; and a joint meeting of the American and
Western Agricultural Economics associations in Long Beach.

Publications, including an *AIC Issues Brief*, can be accessed at the AIC website.

**Project explores effects of diet changes on agriculture and consumer purchases**

What would the effect be on California’s agricultural industries if everyone ate the amount of fruit and vegetables recommended by the USDA for a cancer-prevention diet? And how would increasing the availability of healthier food items in grocery stores and restaurants in low-income neighborhoods in South-Central Los Angeles influence the purchase of those items by low-income households?

Karen Jetter is leading a project based on the first question which explores how much consumption would change for specific fruits and vegetables for low and high income households, and how this increase in demand would be met through greater trade and crop production. It also is examining potential changes in the use and availability of such resources as land, labor and water in response to increased production of fruits and vegetables in California. Preliminary results for the California fruit and vegetable industries as a whole were presented at the 2002 American Agricultural Economics Association meetings.

The second question is being addressed in collaboration with the Center for Advanced Studies in Nutrition and Social Marketing through a project that is examining how increasing the availability of healthier food items in grocery stores and restaurants in low-income neighborhoods in South-Central Los Angeles influences the purchases of those items.

**PIE project generates data on specialty crops**

The year 2002 marked the second year of this three-year project with the USDA Risk Management Agency to develop production input expenditure data to support the development of specialty crop insurance programs, including those for organically grown crops.

The PIE Project is under the leadership of Karen Klonsky.

A standardized methodology for the collection of production input expenditure data (PIE) has been developed and data has been collected and analyzed for several specific crops. PIE reports were completed on blueberries in Tulare County and raspberries and organic strawberries in Santa Cruz and Monterey counties.

Jose Bervejillo compiled a catalog consisting of nearly 2,200 PIE studies of field crops, fruits and vegetables nationwide to allow easy access to details on technology, location, date, format and source of the various studies. A report on how PIE data are formatted by different reporting institutions also was completed. Corn was used as a case study for analyzing 22 different formats, using the comprehensive UC Cooperative Extension format as a benchmark.

The PIE data will be used to update crop budget information necessary for the development of new risk management tools for specialty crops, underserved commodities, and producers in underserved areas and communities.

**Ag exports remain unchanged in 2001**

Agricultural export data developed by the AIC shows that the value of California’s agricultural exports in 2001 remained unchanged from 2000, totaling about $6.5 billion for each year. An *AIC Issues Brief* by José Bervejillo and Daniel Sumner describing international agricultural exports for 2001 and revisions for 2000 was published in early 2003.

The export studies, in their sixth year, show export values by commodity and destination for 50 of California’s leading commodities. The export data, based on government and industry sources, provides the
The nation’s most detailed account of California’s agricultural exports.

The data is also published by the California Department of Food and Agriculture in its *California Resource Directory*.

**NAFTA study reveals mixed effects on California commodities**

A collaborative study of the North American Free Trade Agreement (NAFTA) by the AIC and California Farm Bureau Federation concluded that, among all the factors that have influenced the economics of California agriculture over the last 12 years, the overall role of NAFTA has been relatively small.

The study, prepared by Henrich Brunke and Daniel Sumner, examined 45 of California’s most important commodities and commodity groups where trade plays a significant role to consider how they have fared related to the trade policy changes that occurred under NAFTA.

Results show that where there has been an effect, it generally has been slightly positive. However, some commodities—dairy products, apricots, table grapes, strawberries, lettuce and processing tomatoes—have benefited the most, while others such as asparagus and avocados have been hurt by NAFTA.

The World Trade Organization Agreement of 1994, weather, world supply, strength of the U.S. dollar, devaluation of the Mexican peso and the Asian financial crisis all likely had a larger impact than NAFTA on California’s agricultural economy.

The NAFTA study also included a survey by the California Farm Bureau Federation of its members. Responses indicated concern among growers, and grower-shippers or traders about competition from Mexico or Canada; frustrations with exporting, especially to Mexico; and general problems with low prices.

The Farm Bureau published in April 2003 an extensive report based on the NAFTA study. An *AIC Issues Brief* has also been developed on the topic.

In other NAFTA-related work, Colin Carter presented papers on “Trade Remedy Laws & NAFTA Agricultural Trade,” at the Eighth Agricultural and Food Policy Information Workshop, Puerto Vallarta, Mexico, and at the 2002 American Agricultural Economics Association meetings in Long Beach.

**Emerging uses for whey could boost dairy income**

Three new uses for whey—oxygen-barrier coatings on plastics, gloss coatings on panned confectionery, and oxygen-barrier coatings on nuts in confectionery—could increase demand for whey by 12.3 percent if the new technologies are adopted by at least half of the potential market.

Analysis of the research and development work being done by professor John Krochta’s lab in the UC Davis Department of Food Science and Technology suggests that, nationwide, dairies would benefit by $10 million a year, with California producers receiving $1.9 million of that total.

The additional dairy revenue is small relative to the $24.7 billion in dairy farm receipts in 2001, but the analysis does not consider such other benefits as increased returns to cheese/whey manufacturers, or the benefit to producers and consumers in the markets for confectionery, nuts, and plastics products.

Manuscripts based on this research have been developed for two related, yet distinct, audiences. An *AIC Issues Brief* focuses on benefits to California dairies. An upcoming article in the *Journal of Dairy Science* examines the returns to investment in the research that generated the new uses.
Farm Bill provision creates net loss for California dairy industry

Economic analysis of a new dairy program—the Milk Income Loss Contract (MILC)—introduced in the 2002 Farm Bill shows that most California producers won’t benefit from the new program.

The MILC is a direct payment made to U.S. dairy producers when U.S. milk prices fall below a level specified by the farm bill. All U.S. producers are eligible, but each producer can receive payments only on milk production up to 2.4 million pounds per year.

The quantity limit restricts payments for approximately 72 percent of California producers producing approximately 97 percent of California’s milk. For these producers, the MILC program results in a lump-sum payment that does not raise the incentive to produce milk. On the other hand, for most producers throughout the rest of the country, the quantity limit is irrelevant and the MILC program increases the incentive to produce milk.

This analysis shows that for most California producers, the loss in revenue from lower milk prices (due to increased supply from smaller producers throughout the country) more than outweighs the additional revenue from MILC payments. Thus, the new federal dairy program results in a net revenue loss for California, the biggest dairy state in the country.

Joe Balagtas presented results of the analysis to Cooperative Extension advisors and others at an Agricultural Management and Farm Bill Workgroup workshop and incorporated them into a manuscript for a Giannini Foundation article and an AIC report on the 2002 Farm Bill (http://aic.ucdavis.edu/oa/new.html).

Study explores how pest management research influences farm worker health and safety

Economic and econometric models are being developed that will provide a solid foundation for economic analyses leading to understanding of farmer and farm worker health and safety consequences related to UC pest management research.

Development of new technologies, contributions to new crops, and health and safety training for farm workers in the context of an array of broader public issues are also being explored.

Sarah Stutzman gathered and evaluated data; reviewed research literature on farmer and hired farm worker demographics, income, health status, and work factors; and drafted a discussion paper that conceptualizes the analytical model and defines project variables.

Variables being considered include 1) on-farm work conditions, 2) labor regulations and laws, 3) pesticide regulation, 4) health care coverage, 5) other health factors such as living conditions, nutrition levels, gender, age and ethnicity, 6) income, 7) crops, 8) region and amount of area worked, 9) the type (mechanical, chemical, or biological) and amount of pest management technology used, and 10) other inputs directly attributable to the University of California.

Acknowledging the absence of a full measure of the health and safety aspects of each individual working on California farms, the study is based on data of reported illnesses, injuries, and fatalities.

Dan Sumner presented preliminary results to the University of California Division of Agriculture and Natural Resources Program Council and the UC President’s Agriculture and Natural Resources Advisory Council.

The AIC work is being done in collaboration with the Western Center for Agricultural Health and Safety.
Trade policies affect food security

AIC work comparing national food security under alternate price or trade policies found that trade barriers and price controls can damage national food security.

For these studies, food security related to Indonesia, China, and North Korea was measured according to an Index of Population Food Security (IPFS) that defines food security as the probability over time that at least a target percentage of a population will achieve an adequate diet. This index uses the uncertainty in food prices and incomes to capture the uncertainty people face in obtaining food. Rather than describing food security in the past, this approach considers future levels of food adequacy under different policies that affect prices and incomes.

The study, conducted by Krista Jacobs, Dan Sumner, and professor Rick Barichello from the University of British Columbia, compared the IPFS for Indonesia in the 1990s under actual price policy and an open border policy. During this time, the Indonesian government attempted to stabilize rice prices with the dual aims of shielding consumers and farmers from price fluctuations and promoting self-sufficiency in the nation’s most important staple. This stabilization policy reduced the variability of rice prices but did so at the cost of increasing the average price approximately 25 percent above the border price. The result was less food security (as measured by the IPFS) than would have been the case under an open border policy for rice. The IPFS was as much as 14 percent higher under an open border policy than under the stabilization policy.

Jacobs presented preliminary results of the research at an international symposium at the Food and Agriculture Organization in Rome. Related food security work included a review of the FAO’s Food Balance Sheets (FBS), which calculate the amount of food available by commodity for human consumption within a nation, and are widely used by economists, nutritionists, and other researchers. The review summarized the primary ways in which FBS data is used in research—to evaluate food, energy and nutrient supplies; to assess the nutritional importance of individual food commodities; to describe within-country trends in food availability; to conduct cross-country comparisons of food or commodity availability; and to explore relationships between wealth and nutrition.

Agricultural easement assessment project launched

A National Assessment of Agricultural Easement Programs, a collaborative project between the American Farmland Trust and the AIC, is studying 47 leading agricultural easement programs located in 14 states.

The evaluative study led by Al Sokolow is concentrating on program impacts and effectiveness. It is looking at the preservation value of the more than one billion dollars of public and foundation funds invested in the purchase of development rights on farmland to protect it from urbanization.

The research is in progress and results will be reported in 2003.

A study of California’s agricultural easement programs was completed in 2002 and served as the basis of the national study. Results generated a set of articles in the January-February 2002 issue of California Agriculture magazine.

Location drives California wine prices

In the wine business, location is important. An AIC pricing analysis involving nearly 9,000 premium varietal wines shows
that when other characteristics are constant, a bottle of Napa Valley wine will cost consumers 61 percent more, on average, than wines from other areas of California.

Many other factors also affect wine prices. A one-point increase in the taste test score established by the industry magazine, Wine Spectator, is worth an average additional 83 cents on the price of a 750 ml bottle. An additional year of storage before release is worth another $3.27 per bottle.

Specific vineyard designations also have a more positive effect on wine prices than do “reserve” or “estate” designations. Other variables affecting wine prices include vintage year and grape characteristics.

Results of this study were published in a 2003 AIC Issues Brief by Helene Bombrun and Daniel A. Sumner.

A more detailed 2001 report on the California wine industry also is available on the AIC website (http://aic.ucdavis.edu/research1/market.html).

Fire ants become potential threat

The red important fire ant (RIFA), discovered in San Joaquin Valley almond orchards in 1997 and found in several other locations since, could cost Californians $387 to $989 million annually if they become established in the state.

The RIFA is the subject of a chapter coauthored by Karen Jetter in the AIC book on exotic pests in California (see “Books” section of this report). Jetter was lead author on an article featuring an economic analysis of the problems the RIFA can cause, "Red imported fire ants threaten agriculture, wildlife and homes," in the January/February 2002 issue of California Agriculture magazine.

New mediation approach challenges traditional practice

Results of more than 10 years of conflict management research by Gregorio Billikopf-Encina were published in the peer-reviewed Group Facilitation: A Research and Applications Journal (Spring 2002). The paper, "Contributions of Caucus-ing and Pre-Caucusing to Mediation," challenges some long-standing tenets of mediation practice.

In the conventional approach, mediators bring both parties together and give each stakeholder an opportunity to present his or her case while the other listens (or as often happens, keeps interrupting and creating heated exchanges). Defenders of the traditional approach feel that such outbreaks are a normal part of the process. In reality, the mediator and the stakeholders lose face when these outbursts take place.

The new approach allows stakeholders to meet separately with the mediator in a pre-caucus before ever coming together in a joint session. The pre-caususing, or separate meeting, is used to listen to and coach each stakeholder so he or she will be able to present his or her case more effectively. During the joint session the mediator plays only a minor role. As a result of the pre-caususing, stakeholders are better prepared to face their contender and negotiate a solution. Parties in conflict address each other directly rather than through the mediator. The pre-caususing approach facilitates effective interpersonal conflict management.

Other accomplishments by Agricultural Personnel Management Program advisors Billikopf-Encina and Steve Sutter included several county-based workshops to provide worker pesticide safety training; short courses on human resource management and on agricultural supervision and management; a farm labor regulation workshop; publishing issues of two newsletters, Agricultural Personnel Management and People in Ag: Managing Farm Personnel (electronic); writing a review on the book Narrative Mediation for the International Journal
of Conflict Management; contributing to the publication, Implementing the California Ergonomics Standard in Agricultural Operations, and authoring the book, Labor Management in Agriculture: Cultivating Personnel Productivity, in both English and Spanish (see Books section).

Projects contribute to AgMRC goals

AIC actively contributed as a partner in the Agricultural Marketing Resource Center (AgMRC), a multi-state effort under a USDA grant to support research and outreach on value-added agriculture.

Projects reported by Marcia Kreith under the AgMRC umbrella in 2002 included a literature survey on the economics of labeling genetically modified food by Colin Carter; the economic analysis of new uses of dairy whey; modeling and evaluating dairy provisions in the 2002 farm bill; development of crop profiles for California’s major commodities; model and data analyses for agricultural commodity projections in rice, cotton, beef, and dairy products; and compilation and analysis of international data for gross value of agricultural production, as well as several others, many of which are mentioned in other parts of this report.

Information generated by this work was disseminated through the AgMRC web site (http://www.agmrc.org/) and many personal presentations to such groups as the California Farm Bureau Federation, California Agricultural Leaders, UC Cooperative Extension advisors, World Trade Commission, United Dairymen, International Agricultural Trade Consortium, and a variety of commodity organizations.

Californian Barry Kriebel, president of Sun-Maid Growers of California, joined the AgMRC Advisory Council in 2002. Other Californians on the Advisory Council include Elizabeth Hund, managing director of Rabobank’s Western Region San Francisco Office; and Richard Rominger, Yolo County farmer and former USDA Deputy Secretary.
The following AIC books have either been published or have had substantial work done toward publication during 2002:

### A Statistical Picture of California’s Organic Agriculture, 1995-1998

This book, published in October 2002 by Karen Klonsky, Laura Tourte, Robin Kozloff and Benjamin Shouse, analyzes annual statistical information on more than 70 commodities that were produced and marketed as organic during three crop years: 1995-96, 1996-97, and 1997-98.

It includes information on industry trends, size, specific organic commodities, geographic distribution of production, farm profiles and other details on organic production. The book draws attention such issues as whether growth the industry is experiencing can be sustained, the impact of the new National Organic Standards, and consumer behavior.

Hard copy is available through the AIC. An electronic version and additional related material is available on the AIC website.

### Exotic Pests and Diseases: Biology, Economics for Biosecurity

This book is the culmination of a large multidisciplinary AIC project and public form on exotic pests and diseases. The first five chapters deal with principles and issues associated with exotic pests and diseases. The remaining chapters discuss ten interdisciplinary case studies that focus on specific pests or diseases:

- Bovine spongiform encephalopathy
- Foot and mouth disease
- Plant parasitic nematodes
- Citrus canker
- Red imported fire ant
- Karnal bunt
- Avocado insect and mite pests
- Ash whitefly
- Rice blast
- Yellow starthistle

Regulations concerning introduction, eradication and related measures related to exotic pests are evaluated in detail. The case studies that comprise the core of the book highlight the importance of combining sound biology with economic analysis to evaluate exotic pest policy. Chapter authors include Marcia Kreith, Karen Jetter, and José Bervejillo

Publisher: Iowa State Press  
May 2003  
ISBN: 0-8138-1966-0

### Agricultural Trade and Policy in China: Issues, Analysis and Implications

China is rapidly becoming a major force in global agricultural markets. This book, edited by Dan Sumner and Scott Rozelle, explores how agricultural trade and policy are likely to evolve in China. The authors consider the economic forces at work to determine how China will respond to additional liberalization and how China’s farmers will respond to economic and policy forces.

Part I reviews China’s trade patterns generally and agricultural trade patterns and policies more specifically. Part II examines how the WTO will
affect openness and how China’s agricultural consumers and producers will respond. Part III considers major commodity markets and reforms in the domestic economy that affect domestic supply and demand, and, therefore, trade.

Over the intermediate horizon, adapting to global markets and adjusting commodity policies will allow China to integrate with international markets. However, in the long run, understanding productivity growth holds the key to understanding China’s role in the global marketplace and how farmers in China will fare.

Edited, camera-ready copy of the manuscript was submitted to Ashgate Publishing, London, in November 2002. Publication is expected in August 2003.

**Returns to University of California Pest Management R&D: Overview and Case Studies Emphasizing IPM**

The management of pests, including weeds, insects, mites, nematodes and diseases in California agriculture is an important issue for the producers and consumers of food and fiber well as for agriculture’s neighbors and surrounding communities.

This book by John Mullen, Julian Alston, Daniel Sumner, Marcia Kreith, and Nicolai Kuminoff, focuses on UC pest management research and extension efforts, with particular attention to integrated pest management (IPM) and biological control as elements of pest management, and on the effect of pest management on agricultural productivity and profitability. Case studies are provided for almonds, cotton, oranges, processing tomatoes, and lettuce.

Manuscript review and editing was completed in 2002. AIC publication is expected in Summer 2003.

**Labor Management in Agriculture: Cultivating Personnel Productivity, 2nd edition** (English)

**Administración Laboral Agrícola: Cultivando la Productividad del Personal** (Spanish)

Written by Gregorio Billikopf-Encina, this book for farm employers and farm employee supervisors focuses on managing agricultural labor and cultivating personal productivity. Emphasis is on human resource management to foster good relationships between management and personnel and to provide employers with creative and cost-efficient ways for managing agricultural labor. Numerous case studies and practical examples are included. Individual chapters cover employee selection, training, performance appraisal, compensation, supervisory power, delegation, conducting effective meetings, personnel policies and interpersonal relations.

AIC publication of the English and Spanish versions is expected in 2003. An electronic version is available.
MAJOR CONFERENCES AND MEETINGS

2002 Farm Bill

The AIC cosponsored an Agricultural Management and Economics Workgroup meeting in October to analyze various aspects of the Farm Security and Rural Investment Act of 2002 (2002 Farm Bill). Topics included effects of the farm bill on California commodities, farmland protection provisions, implications for California dairying, impact on the livestock feed sector, effects on organic agriculture, research funds, and crop insurance programs. AIC-affiliated presenters included Karen Klonsky, Julian Alston, Al Sokolow, Joe Balagtas, and Daniel A. Sumner.

Biotechnology for horticultural crops

This two-day conference cosponsored by the AIC in March brought together diverse segments of the horticultural industry to assess scientific, economic, social, regulatory and policy aspects of horticultural biotechnology. Julian Alston headed AIC involvement in the conference.

Consumer-driven agriculture and trade

The AIC sponsored a theme day in December on “Consumer-Driven Agriculture and Trade” in conjunction with the annual meeting of the International Agricultural Trade Research Consortium.

World food day forum

In October the AIC coordinated participation by students, staff, faculty, and members of the greater Davis community in the North American World Food Day satellite conference, “Hungry Farmers: A National Security Issue for All.” Marcia Kreith spearheaded the AIC effort.

Endowment dinner meeting

AIC associate director and China expert Scott Rozelle updated AIC supporters and board members on China’s trade policies and their potential effects on California agriculture at the Center’s annual endowment dinner meeting in November.

Agribusiness management conference

Daniel A. Sumner presented the keynote address on “The Outlook for California Agriculture,” at the annual California State University, Fresno’s Agribusiness Management Conference.
### Income

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<th>Description</th>
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<td>Salaries</td>
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<td>Conference Registration Fees</td>
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<td>Publication Sales &amp; Fees</td>
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<td>Grants, Contracts and Collaborative Research: 2002 awards</td>
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<td>Risk Management Data Outreach</td>
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<td>Grants, Contracts and Collaborative Research: 2001 awards</td>
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<td>* Production Input Expenditure Partnership Agreement</td>
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<td>* Agricultural Marketing Resource Center - Iowa State Sub-award</td>
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<td>* United Nations Food and Agriculture Organization</td>
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<td>* CA Dept of Health Services - Public Health Institute</td>
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<td>* Western Agricultural Health &amp; Safety Center</td>
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<td>** Balance from previous years’ multi-year awards (details below)</td>
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<td>Giannini Foundation mini-grant for AIC Seminars</td>
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### Expenses

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* 2001 Multi-Year funding arrived in 2002, but award periods began in 2001  
  (amounts represent prorated value for 2002 - not full award value)

** Continuing Multi-Year Grants/Contracts

2001 ARE Support for AIC Seminars  
CDHS-PHI no-cost extension through 12/31/02