



California Agriculture Symposium: Challenges and Opportunities

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The two-day California Agriculture Symposium featured noteworthy and thought-provoking presentations from more than 50 speakers from California and the rest of the United States. The California Tasting reception, organized by Susan Webster of the Seed Biotechnology Center at UC Davis, and featuring fruits, nuts, vegetables, meats and local wines and beers, was a highlight of the event and provided a setting for lively interaction among attendees.

The event was organized by the Agricultural Issues Center; Specialty Crops Research Program at UC Davis; California Institute for the Study of Specialty Crops at California Polytechnic University, San Luis Obispo; and the Center for Agricultural Business at California State University, Fresno.

This issue of the *AIC Quarterly* summarizes a few of the presentations. Detailed information on these presentations, as well as many others, and photographs of the conference are available at aic.ucdavis.edu/events/CAS_05/cas.htm.

Keynote address

A.G. Kawamura, Secretary of Agriculture, California Department of Food and Agriculture

California agriculture is extremely vulnerable to exotic pests, making a focus on pest exclusion one of the most important tasks at CDFA. Other priorities for the agency include protection and support of agriculture as a working landscape and part of the environment, improving nutrition and diets, developing biofuels, and domestic food security. California agriculture needs to think harder about what agriculture should be; we are good at one-year planning, but agriculture needs 5-, 10-, and 50-year plans. Agriculture must continue to leave the land more productive. Science must furnish effective leadership. We need to increase outreach and understanding of agriculture.



A.G. Kawamura, Daniel Sumner, Ronald Voss

Driving economic forces for the next decade

Corny Gallagher, agribusiness executive, Bank of America

Several long-term economic issues face agriculture in California: air and water regulations, significant future reduction in direct government payments, trade pressures, land values that are increasing faster than the value of ag production, shifts in nutritional demands, increasing population, the weakening truck and rail infrastructure, vulnerabilities in labor availability, and political shifts from increased urban and minority populations.

China exemplifies both risks and benefits. Domestic demand, fueled by 1.3 billion consumers is huge and growing, but agricultural exports to the United States and other trading partners are also growing. China is investing aggressively in technology and capital-intensive and logistic-intensive research and infrastructure. When labor is a large part of costs, China has a huge cost advantage. Extent of the compe-

tion from China will depend on how fast it makes quality and marketing improvements, growth of China's domestic demand, and how the United States and other competitors perform.



Corny Gallagher

Globalization

and consolidation provide opportunities for full service coalitions. Changing demographics that lead to development of new products and increasing awareness of the health benefits of fresh fruits and vegetables also offer opportunities for California farmers. In addition, we need to more fully utilize byproducts as nutrients or fuels, rather than produce industrial waste.

The bottom line is that California agriculture has to do a better job of understanding the competition. The merger of food and genetics heralds a revolution in the way consumers will view and choose food, and agriculture needs clearly focused safety strategies to become a credible broker of consistent health and product information.

Food, nutrition and California agriculture



Carl Keen

Carl Keen, professor and chair, Department of Nutrition, UC Davis

Over the last 25 years the role of food has moved from preventing nutritional deficiencies to providing optimal health and disease prevention. Research shows that diet may modulate the development and progression of such chronic diseases

as age related vision loss, cancer, cardiovascular disease, diabetes, hypertension, obesity and osteoporosis. The day is rapidly approaching when diets can be tailored to individual needs and the public will increasingly expect an "optimal" diet that will maxi-

mize an individual's potential for a long, healthy and productive life.

Changes in food processing and storage, changes in cultural practices, conventional genetics and genetically modified organisms all will have a role in improving the nutrient profiles in plants and animals. However, the food industry and scientific community will be expected to identify "healthy" diets and foods, produce these foods, and define how they work. Distinctions will have to be made on how these foods affect different target groups using a risk-benefit approach. As with medicines, what is good for the general population may be a risk for susceptible populations such as smokers and pregnant women.

Nutrition education programs that ignore the concept of risk-benefit set the stage for public confusion and anger at the food industry. However, educational programs that include this concept will result in more realistic expectations of what food can provide to the individual, the family and the general population.

Commodity research programs for the 21st century

Ted Batkin, president, California Citrus Board



Ted Batkin

Research in land grant colleges seems to be changing. Applied, problem-solving research is being given lower priority as

publically funded, campus-based researchers focus more on basic or new discovery research.

There will always be a need for new discovery. This is basic to the University mission. However, there needs to be a clearly defined pathway for moving research results from the laboratory to the field or to policymakers in an understandable form, and commodity organizations will increasingly need to provide resources for moving information from the discovery level to growers. This means industry needs to work with universities to fund Cooperative Extension specialists who will work on targeted applied programs.

The California Citrus Board is proposing to fund such a specialist to work at the University of California's Lindcove Field Research and Extension Center in Visalia and focus on specific needs of the industry.

Incentives and disincentives for agriculture



Stuart Woolf

Stuart Woolf, CEO, Woolf Enterprises

The United States needs a long-term vision for agriculture that includes efficient resource management and environmental stewardship, leadership in technology and innovation, positioning as a strong global competitor, financial sustainability and independence, and partners and leaders in global development.

We need to be seen as good proprietors and stewards as we confront globalization, consolidation, unfair trade practices, and conflicting policy objectives.

A grand vision for agriculture should not be a hostage of government budget woes. During the Civil War, Abraham Lincoln's administration passed the Homestead Act, the Pacific Railroad Act, the Morrill Act, and created the U.S. Department of Agriculture, all of which helped lead to sustainable development of the West. What is required are innovative ideas and leadership.

Lessons from a CEO

Michael Mendes, CEO, Diamond of California

To be successful in building sustainable brand values, a company needs to understand core demographics, develop brands that have meaning to consumers, build consumer loyalty and brand value with a focused, consistent message and diverse adver-



Michael Mendes

tising venues. Companies also must cultivate retail trade support and constantly evaluate marketing return on investment.

The changing marketplace for California crops

Roberta Cook, Cooperative Extension specialist, Department of Agricultural and Resource Economics, UC Davis



Roberta Cook

Globalization, consolidation, technology-driven innovation, changes in consumer demand, and shifting buyer-seller relationships require new business models to seize the competitive advantage. The food system is becoming increasingly vertically coordinated and consumer driven toward value-added and convenience products. Environmental and social responsibilities are becoming givens.

What you know is becoming as important as what you grow. Consumers in developing countries are shifting their diets from grains to more fruits and vegetables and animal protein. Latin American and Asian consumers are registering the fastest growth in food demand worldwide. The growing global importance of supermarket chains plays a key role in stimulating fresh produce trade—shelf space needs to be full year-round and retailers are interested in large, year-round suppliers.

Foodservice opportunities for fresh produce are increasing. More consumers are eating out and foodservice demand is rising for fresh and fresh-cut produce.

A global marketing and trade policy

Devry Boughner, Director of International Relations, Cargill, Inc.

Free trade must be thought of in dynamic terms. Open markets grow faster than closed ones, markets driven by supply and demand are more predictable than markets driven by political pressures, and global markets create greater opportunity to use skills



Devry Boughner

and resources effectively. California agriculture has a place in global trade, but its success depends on global demand and the ability to be a global supplier. It must be innovative, efficient, adaptable and competitive. The United States must have a global marketing strategy and a trade policy to support that strategy.

Traceability and commodity demand

Mechel Paggi, director, Center for Agricultural Business, California State University, Fresno

Biosecurity concerns and the proliferation of new products in new packages and new places are increasing the demand on fresh and processed food suppliers for field-to-fork food traceability systems. Competition will force compliance.

Costs for such systems may include investment in new infrastructure, worker training, upgraded recordkeeping systems, and third-party audits for compliance, and returns to investment will not necessarily be reflected in price premiums. However, liability costs should be reduced if there is a food safety event, and market access will be increased to buyers requiring third-party certification.



Mechel Paggi

Three worries for California water management

Richard Howitt, professor, Department of Agricultural and Resource Economics, UC Davis

California water is slowly moving from a politically allocated commodity to an economic commodity.

California water management worries include reconciling water markets, risk, and third-party impacts, whether the focus should be on groundwater quality management or groundwater quantity, and how to permanently finance the environmental water account.



Richard Howitt

The cost of water supply is influenced by risk. There needs to be a trade-off between third-party impacts and supply needs. Option markets and insurance are widespread methods of reducing and selling risk, and application of these tools to water problems should be investigated.

The rate of groundwater quality degradation has increased over the last four decades and the effects are slower and harder to reverse. Increased pumping costs and well failures provide a natural economic control on quantity depletion, whereas the common pool nature of contamination makes economic incentives hard to use with standards and monitoring.

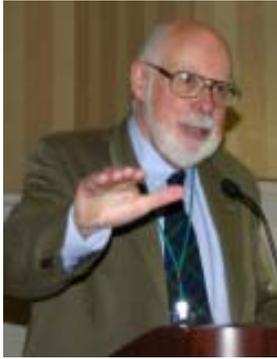
The Environmental Water Account has reduced supply risk to agricultural and urban contractors. It is currently financed by federal and state allocations. Joint financing by water contractors could be viewed as an environmental insurance policy. Permanent financing based on broad environmental insurance would result in manageable premiums.

Rural and urban interface issues

Alvin D. Sokolow, Cooperative Extension specialist emeritus, Department of Human and Community Development, UC Davis

Farmers on the urban edge face restraints on what would otherwise be considered routine practices such as spraying and cultivating. They also are faced with liability for trespassers; theft, vandalism and litter; damage from dogs; weeds and other pests spread from urban areas; and increased traffic on local roads.

Urban residents, on the other hand, face possible drift from pesticide use, disturbances from night farming lights and noise, odors from livestock and food processing operations, dust and smoke, flies, mosquitoes and other pests.



Alvin Sokolow

Some of California's top agricultural counties—Riverside, Fresno, San Joaquin, Tulare—also have the largest agriculture-urban interfaces. Urban-agriculture edge conflicts can be reduced through land use policies and farm-neighbor practices. These include concentrating urban growth in existing urban centers, limiting new residences in agricultural areas, agricultural buffers, and zoning.

Farm-neighbor practices include right-to-farm ordinances, regulated chemical use, clean water requirements for animal facilities, and agriculture education for urban residents.

UC proactively meets the needs of agriculture

Neal Van Alfen, dean, College of Agriculture and Environmental Sciences, UC Davis

The University of California is working hard to meet the needs of agriculture. The best science is being applied to important problems. However, UC is not doing a good enough job in disseminating its findings to the industry and policy leaders. Technology improvement has been an incredible result of partnership between the university and agriculture. The challenge now is how to keep technological advantage. At the university we need to strengthen the county-campus continuum.

Challenges facing agriculture include environmental issues, urbanization, globalization, regulations, meeting the supply needs of big-box retailers, exotic pests and diseases, transgenic crops, transportation to ports, and the need to collectively work with the UC system to make it more cohesive and effective. Resolution of environmental issues must be science based and transparent.



Neal Van Alfen

It is naive to assume California will remain far ahead of the rest of the world technologically. We must redouble our efforts and also recognize that there is much we can learn from others. Developing countries are investing heavily in agricultural technology, research and education, emulating our successes. At the same time, core competencies at UC have been cut as the combined result of state cuts to the university budget and, overall, a stagnating inflow of federal research monies.

There is much to be excited about, however. There are tremendous opportunities to develop value-added crops, as with the marketing of wine produced from grapes grown on particular soils and climates, or in matching the genetics of individuals to the food they eat. This symposium, which was organized by UC, state universities, public agencies, and private sector organizations, is an excellent example of the kind of partnership that will drive success in California agriculture.

Maximizing opportunities for California agriculture

Bill Pauli, president, California Farm Bureau Federation



Bill Pauli

Because of its diversity, sometimes it isn't possible for California agriculture to speak with a common voice.

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Sustainable agriculture and new technologies—transforming problems into win-win situations



Rick Roush

Rick Roush, director, UC Integrated Pest Management Program

The historical pattern to addressing air and water quality issues associated with agriculture has generally had three phases: 1) a period of public concern, 2) lawsuits from public interest groups, and 3) strict regulations implemented by state agencies. It's time to address problems proactively, frankly

and creatively to minimize costs and generate solutions that are wins for both agriculture and the public. The alternative is more regulation.

Technology can help provide win-win solutions. Integrated pest management programs have reduced pesticide use, and no-till farming has reduced emissions from land preparation and harvesting. Commercial transgenic crops with insect and virus resistance and herbicide tolerance are reducing the number of pesticide sprays needed.

Current concerns include air quality with respect to dust and volatile organic compounds and the effect of pesticides, particularly organophosphate and pyrethroid insecticides, on water quality.



California tasting

California Agriculture in its global context: a future of challenges and opportunities

Dan Sumner, director, UC Agricultural Issues Center



Dan Sumner

California agriculture has maintained success in the face of many competitive challenges. This has been true for decades and will continue for decades to come. Success requires change in the face of changing conditions, so the agriculture of two decades from now must

evolve from what we see today. The cost, price and policy profile across commodities affects competitiveness of each commodity and the allocation of land, water and management resources across industries. In the economic environment, just as in the natural environment, linkages abound, so changing one factor affects the whole system.

Domestic farm policy and international trade agreements play a significant role in the economics of California Agriculture. The decline of federal farm subsidies affects only a few commodities directly, but will allow additional flexibility to shift towards comparative advantage. Opening global markets will provide access to consumers, but also means commodities here must compete effectively to succeed.

California agriculture is headed toward continued diversity across commodities, across farm size and across markets. Expansion of total output will continue on less land, with less water and labor, but with more management and more capital.

Our farm resources will remain fully engaged and will shift away from commodities where profit is declining and toward new opportunities. The issues we face are difficult, but no more difficult than those of the past.

Collaborating organizations

The following organizations also contributed to success of the symposium through their assistance and support:

California Association of Family Farmers; California Department of Food and Agriculture; California League of Food Processors; California Strawberry Commission; California Tomato Growers Association; California Tree Fruit Agreement; Citrus Research Advisory Board; College of Agriculture, California State University Chico; Dean's Office, College of Agriculture and Environmental Sciences, UC Davis; Fruit and Nut Research Information Center, UC Davis; Office of the UC Vice President, Division of Agriculture and Natural Resources; Seed Biotechnology Center, UC Davis; UC Agriculture and Natural Resources, Farm and Financial Management Workgroup; UC Cooperative Extension; South Coast Research Center; UC Integrated Pest Management Program; UC Small Farm Center; UC Sustainable Agriculture Research and Education Program; Vegetable Research and Information Center, UC Davis; Western Growers Association.

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Bill Lyons, former Secretary of Agriculture, CDFA and Jay Noel, California Polytechnic State University



Susan Webster, UC Davis Seed Biotechnology Center and Laurie Treacher, AIC



California tasting

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