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University of California Agricultural Issues Center

Congratulations to Secretary-designate Ann Veneman

AIC joins the rest of California agriculture in congratulating Ann Veneman upon her selection to be U.S. Secretary of Agriculture. Secretary Veneman has long been a friend of AIC, supporting our research, participating in AIC programs, co-chairing the AIC endowment campaign, and providing informal advice and guidance. Most recently on December 4, she spoke at our Executive Seminar on the importance of technological innovation and electronic commerce in agriculture. We hope she continues to participate with us whenever she has the opportunity. We also know that she will have a busy and challenging assignment at USDA. We wish her the best and have no doubt that Ann Veneman will be a great Secretary of Agriculture.

E-Commerce and Agriculture: Executive Seminar

Agricultural e-commerce has arrived, with farmers and agribusinesses increasingly turning to the Internet as a means of communication and a way of conducting business. This frontier was the theme of this year's Executive Seminar, co-hosted by the AIC and the UC Center for Cooperatives.

Fittingly, presentations from the December 4 conference in Sacramento as well as a new AIC Issues Brief on the same topic are available in electronic form on the AIC web page (<http://aic.ucdavis.edu/research/exsem00.html>).

Despite the recent hype, only a relatively small share of agriculture's business is currently transacted online. E-commerce, as pointed out during the seminar, is probably more evolutionary than revolutionary when compared to inventions such as the telegraph and the railroad that transformed

the structure of agricultural markets. Rather than fundamental change, e-commerce is leading to refinement of the existing market structure and increasing efficiency.

Firms use e-commerce to decrease costs by conducting business online more easily and quickly. Savings are particularly high for transactions involving goods that can be digitized and actually delivered through the Internet, such as money, information, airline tickets, etc. But, of course, agricultural commodities cannot be digitized.

Emerging patterns of agricultural e-commerce were discussed by Executive Seminar speakers from academia, agriculture "dot-coms" and "brick-and-mortar" agribusiness companies and cooperatives. Gregory Holzwarth, President of Vantage Point Network, a part of John Deere Company, described their subscription farm manage-

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ment service that is delivered entirely online. Royce Nicolaisen, CEO of Agex.com, described how his company creates electronic marketplaces for a variety of tree-nuts, fruits, vegetables and field crops. “Brick and mortar” companies such as Morning Star and Calcot indicated that they will, or already do, use e-commerce in attempts to decrease transaction costs. Overall, speakers were cautiously optimistic about the future of e-commerce in agriculture, citing more accessible and improved information as well as lower costs. In the future, they suggested, these on-line increases in effectiveness and efficiency may well lead to even more consolidation in agribusiness.

Despite the advantages of e-commerce, several barriers are slowing its adoption in agriculture. Many existing agricultural markets have established business relationships and use long-term contracts, leaving little incentive for e-negotiations. Some farmers say they don’t have time to learn how to use the Internet or are concerned about the security of online transactions. Others say they prefer personal contact to computers; a handshake rather than an e-mail. And some producers and processors are concerned that accurate and timely pricing information, available cheaply, will undermine their existing margins.

Seminar speakers pointed to several trends and issues on the horizon for agricultural e-commerce. For example, there was consensus that it is not yet clear if, or how, government will regulate e-commerce in agriculture or in other industries—but this is an area to watch. One growth area is the integration of multiple transactions including shipping, certification, and insurance along with purchases.

New AIC Publication Views Ag E-Commerce

A new AIC Issues Brief, *Emergent E-Commerce in Agriculture* by Rolf A.E. Mueller, reviews the evolving use of the Internet by agriculture, analyzes the Internet’s chief functions and evaluates agriculture’s readiness.

Mueller, whose research has included helping with the AIC survey of Internet use by agriculture, is a professor of agricultural economics at the University of Kiel, Germany.

Amid the diversity and change, Mueller says, overall patterns of e-commerce practices in agriculture are emerging. Those patterns reflect

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not technology but “economic interests and necessities that are as valid on the Internet as in other markets.” Thus he groups agricultural e-commerce sites into four categories according to their economic purposes:

- Saving transaction costs.
- E-market intermediation.
- Integrating e-commerce services.
- Providing e-commerce support services.

Under each category, the publication lists a number of current websites as examples. *Emergent E-Commerce in Agriculture* is available from AIC and is posted on the Center’s website.

New “Measure of California Ag” Now Takes Two Forms

- California agriculture generated about \$24.8 billion in cash receipts in 1999. California’s farm cash receipts grew from 9.5% in 1960 to 13.1% in 1999.
- Through multiplier effects based on 1998 data: California agriculture generated about \$59 billion in personal income, or 6.6% of total annual personal income.

California agriculture supports 1.1 million jobs or 7.4% of all employment.

These and other facts are included in a revised, updated and expanded version of the Center’s most popular publication, *The Measure of California Agriculture*, now available as an AIC report in the usual printed form for \$15.—and, for the first time, also on the web. Now, it can be viewed and downloaded in its entirety or by chapter from its AIC web page (<http://aic.ucdavis.edu/pubs/moca.html>). And from now on, during the interim between paper releases, AIC will provide electronic updates as new data become available.

“*The Measure of California Agriculture, 2000*,” 121 pages, documents California agriculture and its relationships to the rest of the economy with both statistical details and an overview of unifying forces and trends. Also available from AIC are the “pocket cards” that provide key facts.

Conservation Easements’ History in Three Counties

A new Center publication provides answers to a central question in farmland conservation: What motivates farmland owners to voluntarily and permanently give up their development rights?

Just published, *California Farmers and Conservation Easements: Motivations, Experiences and Perceptions in Three Counties* is the result of intensive interviews with 46 farmland owners in three Northern California counties—Marin, Sonoma and Yolo. The authors are Ellen Rilla, Marin County director for UC Cooperative Extension, and Alvin D. Sokolow, public policy specialist for Human and Community Development at UC Davis and AIC associate director.

This report, in the Center’s California Farmland and Open Space Policy series, examines the views and experiences of 37 landowners who had sold permanent conservation easements on their land in recent years, and nine others who had recently purchased parcels with easements already in place. Significantly, all three county programs involved the acquiring of easements primarily to preserve commercial farmland in the path of urbanization, as compared to the more traditional use of such easements for environmental purposes.

In general, the authors find that farmland owners are motivated by both short-term factors, including the cash payment, and complex longer-term reasons that are often rooted in personal beliefs about land preservation.

California Farmers and Conservation Easements: Motivations, Experiences and Perceptions in Three Counties, 50 pages, is available from the Center for \$10.

New Review of Ag R & D Payoff

A new volume, “A Meta-Analysis of Rates of Return to Agricultural R&D,” by AIC Associate Director of Science and Technology Julian M. Alston, Connie Chan-Kang, Michelle C. Marra, Philip G. Pardey, and TJ Wyatt summarizes decades of analysis and hundreds of previous studies.

The authors statistically analyze the entire literature on returns to agricultural research and development since 1953. Their conclusions can be summarized in five main points:

- There is no evidence to support the view that the rate of return has declined over time.
- The rate of return to research may be higher when the research is conducted in more-developed countries.
- The rate of return to research varies according to problematic focus in ways that make intuitive sense. For example, one would expect that longer production cycles are associated with lower rates of return.
- A lower rate of return is found in studies that combine research and extension, and especially in studies of extension only, compared with studies evaluating research only.
- Characteristics of the evaluation itself, particularly the scope of the research being evaluated and choices about research lags, were found to have important, plausible systematic effects on the estimated rates of return.

To view this book online, download it in pdf format, or to order one free paper copy, go to the International Food Policy Research Institute website. You can get there directly (<http://www.ifpri.cgiar.org/>) or go to the AIC “related links” webpage (<http://aic.ucdavis.edu/links/>) and click on the IFPRI hyperlink.

Two Viewpoints on Biotechnology

Divergent views about biotechnology in agriculture and its public policy implications were examined during a recent seminar for state professionals and university researchers co-sponsored by the Center and the UC Sustainable Agriculture, Research and Education Program (SAREP).

Martina McGloughlin expressed the view that biotechnology, including bioinformatics and genomics (1990s), recombinant DNA and marker-assisted selection (1980s), and cell culture in the mid-20th century, is one more step in a continuum that extends back through selective cross breeding in the 19th century and domestication of corn 8,000 years ago. McGloughlin is director of the UC Davis Biotechnology Program and the UC Davis Life Sciences Informatics Program.

Michael Hansen, research associate with the Consumer Policy Institute (a division of Consumers Union), however, argued that modern biotechnology is more than an extension of conventional breeding. He considers biotechnology different in kind, not just in degree, in contrast to conventional breeding where only a small amount of genetic diversity is accessed.

Today’s technology enables modification by a few specific genes at a time, McGloughlin pointed out, allowing for quicker incorporation of precise genetic traits. This will permit more flexible crop management, decreased dependency on conventional insecticides and herbicides, and enhanced nutritional composition.

McGloughlin advised focusing on the safety of the product, rather than the process that created it, by enforcing existing rules. In contrast, Hansen said these new technologies require a new regulatory framework and possibly new statutes. Both agreed there is need for regulations that are scientifically based and do not inhibit innovation to produce environmentally safe products with nutrient characteristics that benefit the world’s population.

Center Website Revamped, Expanded

AIC's website is now more informative with much new material posted recently.

The new AIC website area "Online Publications and Data" contains substantial new material. During the past few months we have begun to release our new publications in electronic pdf format. This section features our new major release, *The Measure of California Agriculture, 2000*.

The pdf format allows us to post detailed material supporting our publications. For example, our webpage dedicated to *Agriculture in the Sacramento Region: Trends and Prospects* (<http://aic.ucdavis.edu/pub/AginSac.html>) contains links to individual county farmland conversion maps in color that do not appear in the paper edition.

"Research Working Papers" is another online area that has grown substantially. This part of the AIC webpage features research papers, reports and presentations that offer more detailed and technical analysis on important topics. This material is provided by AIC associate directors, AIC staff, and researchers from other universities and government agencies. Recent additions include papers and presentations on food security, exotic pests and diseases, the winegrape industry, and e-commerce.

We have now grouped all of the material on our website by subject area. Starting from the AIC homepage (<http://aic.ucdavis.edu>), the entire collection of material on the AIC website can be accessed through 11 research areas.

Users can also search through archived Quarterlies, Issues Briefs, Publications and Data, and Research Working Papers.

Our revised AIC site is part of the continuing trend in online research and publishing to use the pdf file format to make information available online. This makes more information available faster and cheaper in a format that is easy to reproduce and

store. Unfortunately, this format may be less accessible to those with slower computers or older software. We have designed the new AIC webpage to minimize these problems, but to some degree they are inevitable. We welcome any comments or suggestions you have on the new site.

Annual Outlook for Wine and Winegrapes

Issues facing the winegrape industry, including global trends in wine marketing and the potential economic impact of the spread of plant diseases, were among topics of the Center's third annual Winegrape Outlook Workshop in October.

Researchers from Australia, France and Germany as well as UC and other U.S. universities reported on a variety of topics including: (a) dynamics of winegrape pricing; (b) impact of wine taxes on demand; (c) the relationship between wine industry organization and grape prices; (d) an overview of the German wine industry and potential for Internet marketing; (e) the role of the federal government in the U.S. wine and winegrape industry; (f) effects of farm labor supply changes and grape workers; (g) economic impact of Pierce's Disease and *Eutypa* on the California grape industry; and (h) an overview of winery-grower contracts, and effects of those contracts on grape prices over time (based on data from *AIC Issues Brief* No. 11). ■

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- 1 Mail check (payable to UC Regents) to
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- 2 E-mail Visa/Mastercard information to agissues@ucdavis.edu

Prices include postage and sales tax; orders are shipped immediately.
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Recent publications

<i>New</i>	MOCA	Measure of California Agriculture, 2000	15.00
	CFCE	California Farmers and Conservation Easements (2000)	10.00
	SR	Agriculture in the Sacramento Region: Trends and Prospects (2000)	12.00
	EPD	Exotic Pests & Diseases: Biology, Economics, Public Policy (1999)	20.00
	EIW	Economic Impacts of Irrigation Water Cuts in the Sacramento Valley (1999)	12.00
	FMD	Potential Impact of Food-and-Mouth Disease in California (1999)	20.00
	CFUP	California Farmland and Urban Pressures: Statewide and Regional Perspectives	20.00
	OR-1	Statistical Review of California's Organic Agriculture 1992-1995	18.00
	NF-1	Farmers and Neighbors: Land Use, Pesticides and Other Issues (1996)	13.00

Videos

Exotic Pests and Diseases: Biology, Economics, Public Policy (13 min) \$15. (*\$10 if ordered with the book of same title.*) An overview of (1) the increasing threat to California from invading insect, weed and other pests or animal diseases from foreign countries, (2) the cooperative federal and state system designed to exclude, eradicate, or control them, and (3) the public policy issues involved. (1999)

Farmers and Neighbors at the Edge (10 min) \$15. An overview of the challenges facing the growing urban/suburban interface with regards to the use of pesticides, ag and land use practices and policies. (1995)

Shaping Agriculture: California's Role (9 min) \$15. An introductory glimpse at the issues faced by global agriculture in the 21st century using California as a test case for the interaction of population, resources and technology. (1995)

Agricultural Issues Center
University of California
One Shields Avenue
Davis, CA 95616-8514

Telephone: 530 752 2320

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