

## Invited Papers

### WAEA Presidential Address

**“Crossing the Next Meridian: The Economics of Rural-Urban Interdependence, Institutions and Income Distribution in the American West.” Bruce A. Weber (Oregon State University)**

This paper explores and develops three ideas: (1) that the aridity of western North America and its attendant characteristics have fundamentally shaped the work of western agricultural economists and encouraged some distinctive western contributions to the study of economics; (2) that, in order to understand economic relationships that are critical to rural western economic development, economists need to move beyond the standard equilibrium economic models and explore some emerging models of spatial development and institutional change in which the concept of “increasing returns” plays a key role; and (3) that the West provides a fine laboratory for testing these frameworks.

### Keynote Address

**“Public Policy and Agricultural Economics.” Michael V. Martin (University of Minnesota)**

Agricultural economists must find ways to effectively contribute to the public debate on important policy issues for at least two reasons. First, objective analysis drawing on sound economics is essential to informed policymaking. Agricultural economists have the capacity to provide this type of analytical input. A number of emerging issues call out for the kinds of analysis agricultural economists can offer.

Second, in many circles, agricultural economics as a profession is now viewed as largely irrelevant. As a consequence,

funding and participation in professional associations have declined. If agricultural economics is to survive, then agricultural economists need to be useful and visible. Servicing policymakers and providing the general public with credible policy analysis can go a long way to meeting this need. Doing so, however, will require new approaches to work in agricultural economics.

### Free Session: Implementing the AAEA Visioning Process

**“Implementing the AAEA Visioning Process.” Walter J. Armbruster (Farm Foundation)**

A visioning project “Food, Agricultural and Resource Economics for the 21st Century” was initiated to examine how to provide products and services effectively to help all agricultural economists better serve society. W.K. Kellogg Foundation provided partial financial support. Listening sessions, a mail survey, and a visioning conference following the AAEA San Antonio meetings in August 1996 obtained input from more than 500 agricultural economists, including many who are not AAEA members. The goal was to identify a common vision on products and services needed and how to structure the AAEA and related organizations to provide them. The project report and recommendations are available on the AAEA home page.

The AAEA board has moved aggressively to implement the recommendations. We have adopted a strategic plan and hired consultants to review AAEA business office management, communications, and marketing efforts. The Toronto meeting content has been expanded through the use of more outside speakers. Advisory committees have been established to provide

input to the board on the Awards Program and Fellows election process, the governance structure, and an executive director job description.

Some of the recommendations have been implemented by C-FARE, specifically providing input from agricultural economists on the research title reauthorization and on budget appropriations. C-FARE also organized a priority setting conference, and the resulting report and executive summary will help all of us communicate about our profession. AAEA, in cooperation with C-FARE, is experimenting with press outreach from the Toronto meeting.

The next steps for AAEA include board discussion and decisions on consultant recommendations; a program planning committee to advise me on the 1998 annual meetings; pilot projects using Kellogg funding to reach out to agricultural economists who are not members; and increased electronic access to products and services.

I believe that we are at an exciting point in the evolution of our profession. I hope that you will work with me to implement the good ideas developed to make our association more useful to the broad range of agricultural economists and to make our profession more useful to society.

**Session: Regulatory and Price Approaches to Agricultural Water Conservation: What Can Be Achieved? Moderator: R. G. Taylor (University of Nebraska)**

**“Evaluating the Effectiveness of Conservation Water-Pricing Programs.” Ray Huffaker and Norman Whittlesey (Washington State University)**

Charging farmers increasing block rates for their water deliveries has successfully led to improved water quality in parts of the western United States. Tiered water prices encourage farmers to reduce their water applications by increasing their on-farm irrigation efficiencies, and this results in reductions in toxic irrigation return flows.

We analyze the extent to which tiered-pricing structures can be more broadly applied to increase overall water supplies for agricultural and nonagricultural uses in the West, and conclude that increasing block rates on water deliveries may be counterproductive if increased irrigation efficiencies led to greater consumptive water use by crops.

**“Aggregation Bias in Estimation of Water Demand and Nonprice Water Conservation Measures.” Thomas McGuckin (University of New Mexico State University), Ari M. Michelsen (Washington State University), and Donna Stumpff (New Mexico State University)**

Three residential water demand models, varying in level of aggregation, were constructed to investigate the effectiveness of price and nonprice conservation programs. The models were tested using a pooled eleven-year time series, seven-city cross-sectional database developed for this study. All three models were able to predict water demand with a high degree of accuracy. Price elasticities were found to be very low, lower than reported by most previous studies, and varied significantly by season. Statistical analysis reveals that estimates of conservation program effectiveness cannot be reliably transferred to other cities. Detailed examination reveals the existence of large aggregation bias in water demand data. In the presence of aggregation bias other analysis methods produce unreliable results.

**“Emerging Price Conservation Programs in Agricultural Water Use.” Ari M. Michelsen (Washington State University), R.G. Taylor (University of Nebraska), Thomas McGuckin (New Mexico State University), and Ray G. Huffaker (Washington State University)**

Recent reclamation policies and regulations developed in response to legislation and litigation encourage or require irrigation districts to adopt conservation price incentives. Using unpublished survey results and new district level information and case studies, we examine the implementation incentives of water conservation price pro-

grams. Our findings reveal that the majority of districts are continuing to use fixed charges independent of water deliveries and that almost all conservation rate structures are designed so that the first tier allocation satisfies most crop water needs. With ample water allocation in the initial block there is no effective difference in rate structure and the price incentive impact is

diminished or nonexistent. However, the rate structures implemented may be achieving desired district hydrologic, legal, political or internal management objective. Under existing reclamation policy, the question of whether conservation is being achieved by price or other programs depends on how a district defines conservation.

## Selected Papers

**Session: Surface Water Allocation Issues. Moderator: Molly Espey (University of Nevada, Reno)**

**"The Edwards Aquifer Water Resource Conflict: Examining Impacts of USDA Programs." Glenn D. Schaible (USDA/ERS), Ronald D. Lacewell, and Bruce A. McCarl (Texas A&M University)**

This paper summarizes results of economic analysis of the impact 1990 and 1996 USDA farm programs have on irrigation water withdrawals from the Edwards Aquifer (south-central Texas). Economic modeling, a producer behavioral survey, characteristics of program participating farms, and economic theory are used to explain producer irrigation behavior.

**"An Economic Model of Water Transfer Analysis for the Central Valley Project Improvement Act." Bin Zhang, Steve Hatchett, and Roger Mann (Ch2M HILL)**

This paper describes the Central Valley Production and Transfer Model developed for the analysis of Central Valley Project Improvement Act (CVPIA) alternatives. While some general results are discussed, this paper focuses on modeling methods and results of a model confirmation run to simulate the 1991 California Drought Water Bank.

**"Analysis of Agricultural Economics for the Central Valley Project Improvement Act Programmatic Environmental Im-**

**act Statement." Steve Hatchett, Roger Mann, and Bin Zhang (Ch2M HILL)**

Section 3409 of the Central Valley Project Improvement Act (CVPIA) requires a Programmatic Environmental Impact Statement (PEIS) of the Act. The CVPIA may affect Central Valley agriculture in many ways. This paper describes the analysis of agricultural economics for the PEIS with emphasis on the Central Valley Production Model.

**"The Impact of Surface Water Reallocations on the Eastern San Joaquin Valley." Cheryl Brown, George Goldman (University of California, Berkeley), Richard Howitt (University of California, Davis), Jerome Siebert (University of California, Berkeley), and Jim Sullins (University of California, Tulare County Cooperative Extension)**

This study considers the impact that surface water reallocations from agriculture could have on the agricultural economy of California's eastern San Joaquin Valley. Using simulations of ten years of surface water cuts, we report changes in groundwater levels, water use, acreage, crop mix, total personal income, and employment.

**Session: Resource Demand and Fine Wines. Moderator: Chris Bastian (University of Wyoming)**

**"Effects of Wood Quality and Technology on Output and Input in the Wash-**