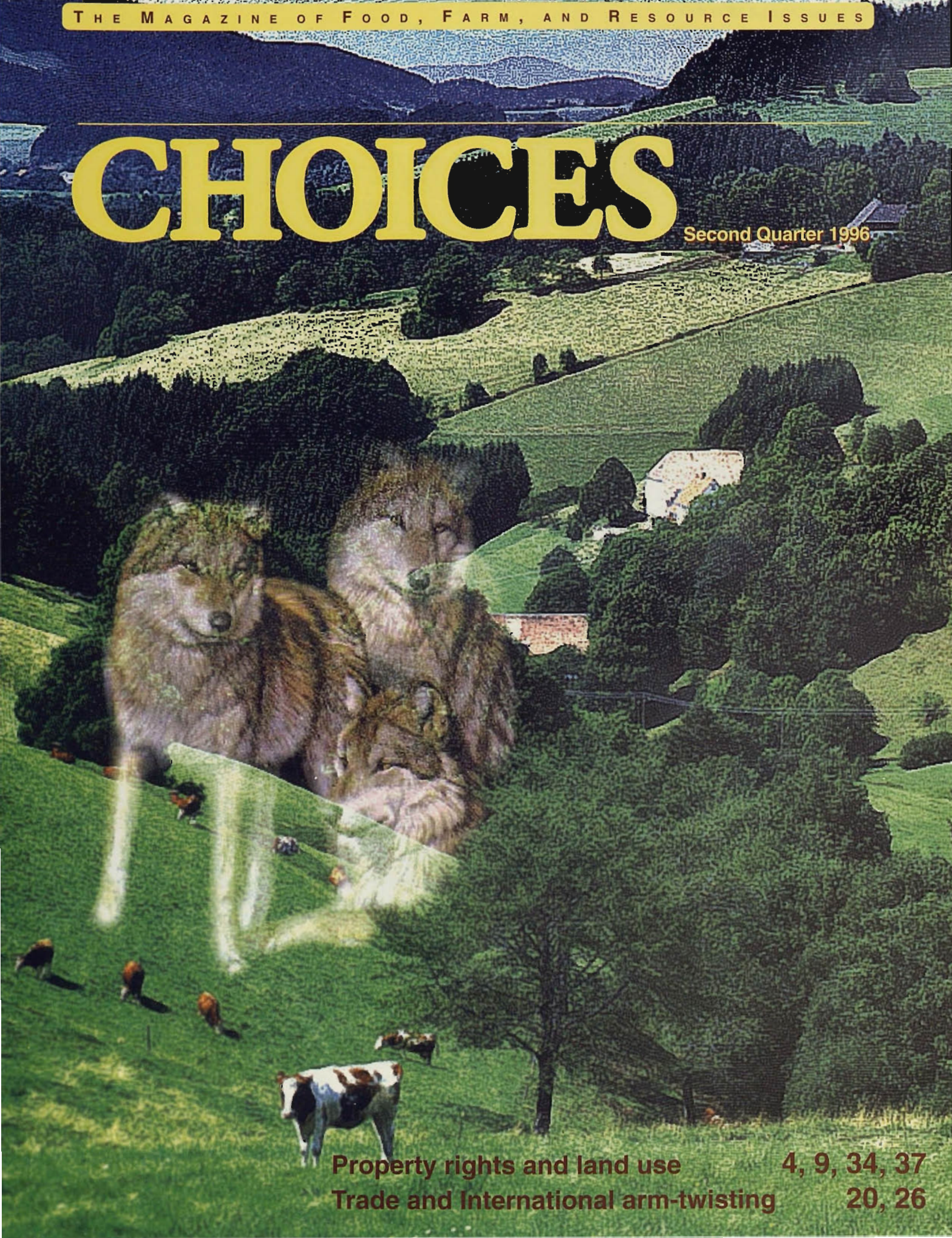
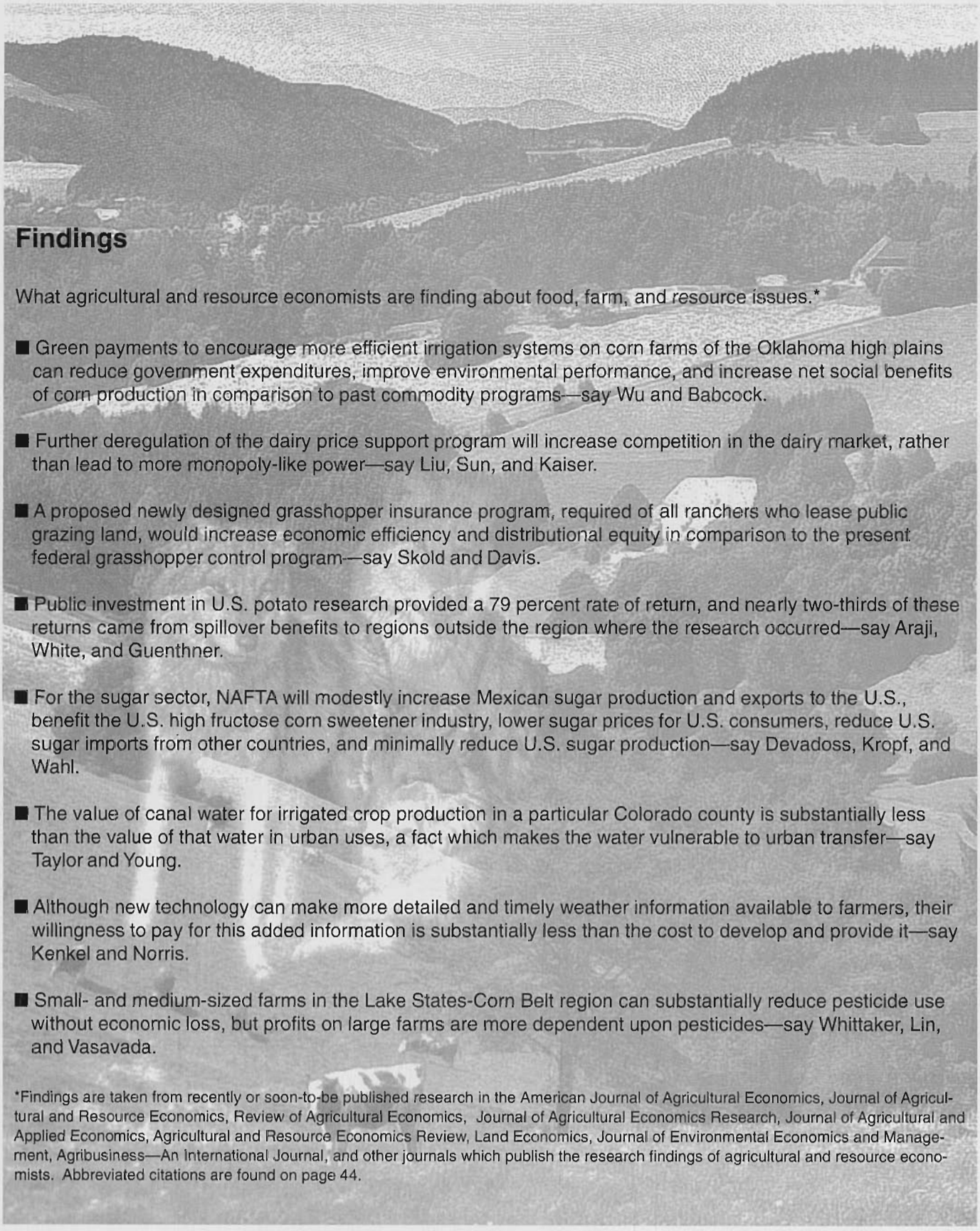
THE MAGAZINE OF FOOD, FARM, AND RESOURCE ISSUES

CHOICES

Second Quarter 1996





Findings

What agricultural and resource economists are finding about food, farm, and resource issues.*

- Green payments to encourage more efficient irrigation systems on corn farms of the Oklahoma high plains can reduce government expenditures, improve environmental performance, and increase net social benefits of corn production in comparison to past commodity programs—say Wu and Babcock.

- Further deregulation of the dairy price support program will increase competition in the dairy market, rather than lead to more monopoly-like power—say Liu, Sun, and Kaiser.

- A proposed newly designed grasshopper insurance program, required of all ranchers who lease public grazing land, would increase economic efficiency and distributional equity in comparison to the present federal grasshopper control program—say Skold and Davis.

- Public investment in U.S. potato research provided a 79 percent rate of return, and nearly two-thirds of these returns came from spillover benefits to regions outside the region where the research occurred—say Araji, White, and Guenthner.

- For the sugar sector, NAFTA will modestly increase Mexican sugar production and exports to the U.S., benefit the U.S. high fructose corn sweetener industry, lower sugar prices for U.S. consumers, reduce U.S. sugar imports from other countries, and minimally reduce U.S. sugar production—say Devadoss, Kropf, and Wahl.

- The value of canal water for irrigated crop production in a particular Colorado county is substantially less than the value of that water in urban uses, a fact which makes the water vulnerable to urban transfer—say Taylor and Young.

- Although new technology can make more detailed and timely weather information available to farmers, their willingness to pay for this added information is substantially less than the cost to develop and provide it—say Kenkel and Norris.

- Small- and medium-sized farms in the Lake States-Corn Belt region can substantially reduce pesticide use without economic loss, but profits on large farms are more dependent upon pesticides—say Whittaker, Lin, and Vasavada.

*Findings are taken from recently or soon-to-be published research in the American Journal of Agricultural Economics, Journal of Agricultural and Resource Economics, Review of Agricultural Economics, Journal of Agricultural Economics Research, Journal of Agricultural and Applied Economics, Agricultural and Resource Economics Review, Land Economics, Journal of Environmental Economics and Management, Agribusiness—An International Journal, and other journals which publish the research findings of agricultural and resource economists. Abbreviated citations are found on page 44.

ON OUR COVER—The Endangered Species Act and other forces are shaping the way we use our land, as discussed by several authors in this issue.

by Andrew Schmitz ■ **Guest Editorial**

Further Comments on Booms and Busts

Andrew Schmitz is professor and Eminent Scholar in the Department of Food and Resource Economics, University of Florida, where he holds the Ben Hill Griffin III Endowed Chair.

Booms and busts in agriculture can occur simultaneously; a boom for one may be a bust for another. The net effects (i.e., the dollar gains to the winners minus the dollar losses to the losers) of booms on export-based commodities, however, are generally positive. These effects vary by industry and depend on the percentage of the domestic crop that is exported and the extent to which the boom's occurrence was influenced by a growth in export demand and/or a domestic production shortfall. The largest net benefits from booms are generally associated with export-oriented commodities, whose prices increase because of export demand growth.

Consider the rapid rise of U.S. corn prices in 1995 and 1996. This was clearly a boom to corn growers, especially those with normal or exceptional crops, although the gains would have been even greater had the price increase been led solely by increases in export demand. In contrast, the corn price spike had a devastating effect on corn users—including hog and beef producers, poultry operations, dairy producers, and corn sweetener manufacturers. In spite of corn users' large losses, the boom generated net gains.

In my 1995 Waugh lecture, "Boom/Bust Cycles and Ricardian Rent," presented at the American Agricultural Economics Association annual meeting, I discussed the concept of a wealth multiplier. This concept quantifies how a land-value increase during a boom spreads through the economy. For example, the wealth multiplier effects of a corn price boom are positive for corn growers in states such as Indiana and Iowa and negative for the cow/calf sector in states such as Florida. For the wheat sector, however, do the negative wealth multiplier effects of the rapid rise in wheat prices have the same meaning? As with corn, wheat producers experience significant increases in wealth. For example, a 3,000-acre wheat farm could experience an increase in wealth of $300,000. On the demand side, however, corn is considered a feed grain, and wheat generally is not. An increase in the price of wheat results in price increases of consumer goods such as bread and cereals. Because the effects of wheat price increases are widely distributed, the magnitude of each individual's increased expenditures is small; hence, the negative wealth multiplier effect on the demand side of the equation is absent. In contrast, the price increase—in the case of corn—had a significant negative wealth effect on dairy producers and cattle ranchers. A 1,000-head cattle rancher, for example, easily lost $400,000 as cow and calf prices fell by more than 30 percent. Unfortunately for beef producers, the expansionary phase of the beef cattle cycle, which had already depressed prices, coincided with the corn price boom.

The distributional effects of booms and/or busts cannot be ignored. Calculations of wealth multipliers for both losers and winners highlight these effects and can demonstrate how a boom's (or bust's) effects on the grain economy progress through the food chain from production to consumption. The transmission effect, among others, depends upon the market power of the various segments. Empirical evidence shows that food processors, for example, are generally able to pass on input price increases to consumers—unlike the earlier case in which cattle ranchers could not pass on to consumers the full effect of the corn price increase. Booms and busts have the greatest wealth impact on primary producers.

Why did corn and wheat prices recently increase so sharply? Corn price futures, for example, were not expected to jump to $4.60/bu (May contract) on April 18, 1996, nor wheat to $6/bu (May contract). Correspondingly, feeder cattle futures were not expected to fall to 53¢/lb (May contract) as of April 18. My work on booms and busts provides some answers. Consider what happened with grain stocks. In early 1996, the total of public and private corn and wheat stocks fell below optimal levels. One reason is that there appears to be no one-to-one substitution between public and private stock holdings. As public stocks were depleted through various types of government programs, private stock-holding did not increase significantly. In the future, government policy makers should revisit the issue of optimal private and public storage. Optimal stockpiling of grain could at least partially offset the many causes of the boom/bust phenomenon.

Table of Contents

Feature

Gallery

Goldstein Keeler Renkow

Orden Paarlberg Roe

Hertel Kherallah Beghin

Offutt

Jon H. Goldstein is an economist with the Office of Policy Analysis, Department of the Interior. He also serves as the principal economist for the Endangered Species Committee, the cabinet-level committee empowered to grant exemption from the ESA. As such, he spent 1991–92 working on the conflict between logging in the old-growth forests of the Pacific Northwest and the preservation of the spotted owl. His principal interest is in incentive-based solutions to natural resource and environmental problems.

Andrew G. Keeler is an assistant professor in the Department of Agricultural and Applied Economics at the University of Georgia, where his research emphasizes the economics of environmental regulation.

Mitch Renkow is an assistant professor in the Department of Agricultural and Resource Economics at North Carolina State University. His current research interests include rural development, local public finance, and the economics of solid waste management.

David Orden is associate professor of agricultural and applied economics at Virginia Polytechnic Institute and State University. He is currently chair of the International Agricultural Trade Research Consortium. His recent research has focused on trade and agricultural policies, and his recent publications include a chapter on the NAFTA agricultural negotiations published in *The Political Economy of American Trade Policy.*

Robert Paarlberg is professor of political science at Wellesley College, and faculty associate at the Harvard University Center for International Affairs. He has conducted extensive research on

Profile

In Short

Departments

Publisher
The American Agricultural Economics Association
1110 Buckeye Avenue
Ames, IA 50010-8063

Editor
Harry W. Ayer, PhD
Department of Agricultural and Resource Economics
University of Arizona
Tucson, AZ 85721

Managing editor
Sandra Clarke
1110 Buckeye Avenue
Ames, IA 50010-8063

Art director
Valerie Dittmer King
King Graphics
Grand Junction, Iowa

Printer
Pendell Printing, Midland, Michigan

Cover and center spread design
Ken Patton
Fine Print
Ames, Iowa

CHOICES (ISSN 0886-5558) is published quarterly by the American Agricultural Economics Association for people who want to be informed about food, farm, and resource issues—and the policies that affect them. Views expressed herein are those of the authors, and not necessarily those of CHOICES or its publisher. Postage paid at Ames, IA, and additional mailing offices. Subscription rates for U.S.: individuals—$20.00 per year, libraries—$32.50 per year (four editions). In Canada add $10 per year. Outside U.S. and Canada add $20. Send subscription correspondence to CHOICES, AAEA Business Office, 1110 Buckeye Avenue, Ames, IA 50010-8063. Telephone (515)233-3234, FAX (515)233-3101. Send four copies of each manuscript to the editor, Harry W. Ayer, Department of Agricultural and Resource Economics, University of Arizona, Tucson, AZ 85721, telephone (520)621-6257 and FAX (520)621-6250.

---

the Uruguay Round trade negotiations, and his most recent publication is *Leadership Begins at Home: U.S. Foreign Economic Policy After the Cold War.*

Terry Roe is professor of applied economics at the University of Minnesota, and director of its Center for Political Economy. His research interests include endogenous growth, health and environmental economics, and applied general equilibrium modeling.

Thomas Hertel is professor and director of the Center for Global Trade Analysis in the Department of Agricultural Economics at Purdue University. For the past two years he has spent much of his time quantifying the impact of the Uruguay Round Agreement, as well as projecting future patterns of trade in the Asia-Pacific region.

Mylène Kherallah is a postdoctoral fellow at the International Food Policy Research Institute. She is currently studying agricultural market reform, export promotion, and agricultural diversification in several developing countries.

John Beghin is an associate professor at North Carolina State University. His research and teaching interests include agricultural international trade, trade and environment linkages, and the political economy of farm policies.

In August 1995, Susan Offutt addressed the AAEA Committee on Women in Agricultural Economics on the future of commodity subsidies; those remarks form the basis for her article in this issue of *Choices.* In January 1996, she left the National Academy of Sciences' National Research Council, where she served as executive director of the Board on Agriculture, and became administrator of USDA's Economic Research Service.