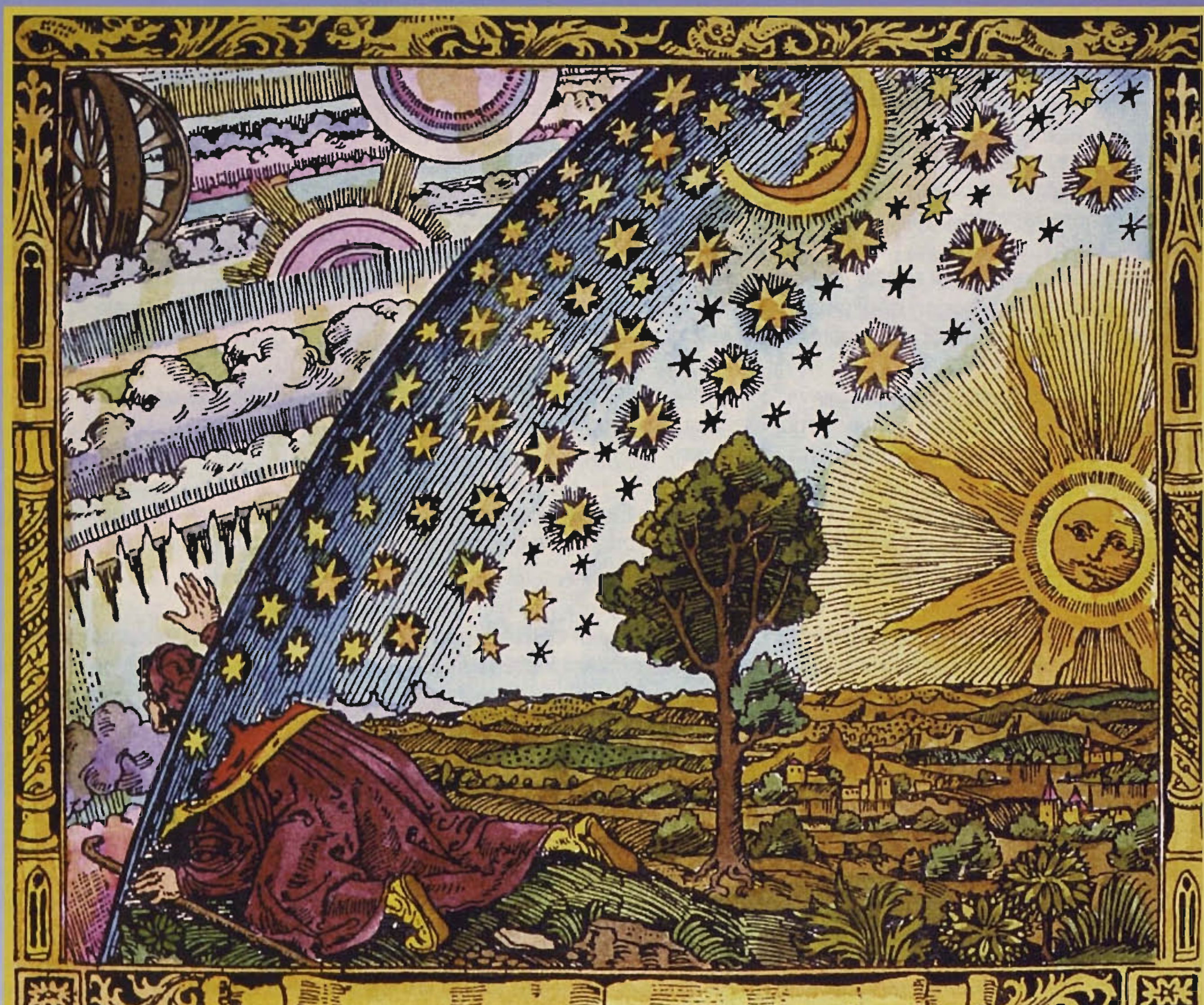
THE MAGAZINE OF FOOD, FARM, AND RESOURCE ISSUES

CHOICES

First Quarter 1999



Strategies for coping with climate change 4, 9, 13, 22

China and world food markets 18, 25

Findings

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

- **Oligopoly Power in U.S. Food and Tobacco Manufacturing.** Oligopoly power in U.S. food and tobacco manufacturing cut general welfare by just over $15 billion in 1987—say Bhuyan and Lopez.

- **BSE in the U.K.** In the absence of any governmental actions, the BSE crisis in the United Kingdom would have reduced profits for the cattle sector by over 30 percent—say McDonald and Roberts.

- **Japanese Technical Barriers to Apple Trade.** Japanese phytosanitary regulations on the importation of U.S.-produced Fuji apples protects Japanese apple producers from U.S. competition at the expense of consumer welfare, even considering potential new pest damage—say Calvin and Krissoff.

- **Consumer Willingness to Pay for Insecticide-Free Apples.** Compared to apples treated in the usual way for pests, consumers are willing to pay more for insecticide-free apples, especially if all cosmetic attributes remain the same—say Roosen, Fox, Hennessy, and Schreiber.

- **Variable Fertilizer Rates for Iowa Corn.** In twelve Iowa counties, changing from uniform to variable fertilizer rates within fields increases yields and reduces fertilizer costs, but the profitability depends on the cost of adopting new variable-rate technology—say Babcock and Pautsch.

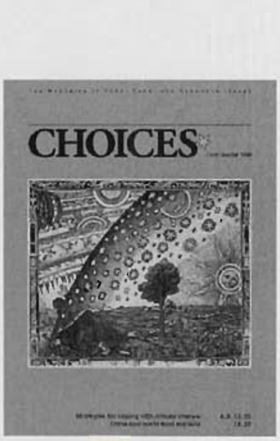
- **Variable Fertilizer Rates for Idaho Seed Potatoes.** For a single field of Idaho seed potatoes, using variable instead of uniform nitrogen applications increased yield slightly, but the added costs of variable rate applications overshadows the value of yield increases—say Watkins, Lu, and Huang.

- **Timing Fertilizer Applications in Indiana.** For risk-neutral farmers, growing-season-only applications of nitrogen costs minimally more than conventional applications, but for risk-averse farmers the estimated costs increase substantially—say Huang, Hewitt, and Shank.

- **Reducing Manure Phosphorus from Large-scale Hog Farms.** Supplementing soybean meal with synthetic amino acids or phytase may be a profitable way for land-short hog operations to meet new phosphorus regulations—say Boland, Preckel, and Foster.

- **Accuracy of USDA Forecasts.** Over time, the accuracy of USDA forecasts for beef and pork production and supply have improved and now meet the criteria for optimal forecasts—say Bailey and Brorsen.

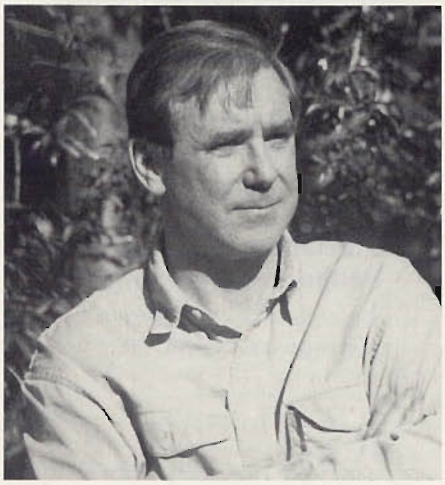
*Findings are taken from recently or soon-to-be published research in the *American Journal of Agricultural Economics, Review of Agricultural Economics, Journal of Agricultural and Resource Economics, Journal of Agricultural Economics, Journal of Agricultural and Applied Economics, Agricultural and Resource Economics Review, Land Economics, Journal of Environmental Economics and Management, Canadian Journal of Agricultural Economics, Agribusiness—An International Journal,* and other journals which publish the research findings of agricultural and resource economists. Abbreviated citations are found on page 17.



ON OUR COVER—The cover art, from an Italian sixteenth-century hand-painted wood engraving, is titled "The Universe and the Man." Its imagery of a scholar peeking behind the veil of the "known" to catch a glimpse of what lies on the other side is still a fitting metaphor for the essence of scientific inquiry today, including the science surrounding global warming and its effects on agriculture, a topic addressed by several authors in this issue.

by Daniel A. Sumner ■ **Guest Editorial**

Agricultural Policy Objectives for the New Decade: Regaining the Momentum



Daniel A. Sumner is the Frank H. Buck, Jr., Professor in the Department of Agricultural and Resource Economics at the University of California, Davis, and director of the Agricultural Issues Center.

Most economists and many others now accept the long-term goal of open agricultural markets and much-reduced government control of commodity supplies and prices. As we look to the new millennium, the compelling logic of open markets and economic freedom, and the obvious failure of the opposite (as in North Korea, for example), has overwhelmed most of the remaining disagreements about this long-term goal.

Here, however, I focus not on domestic and trade policy for agriculture in the new millennium but rather on agricultural policy for the new decade. In this intermediate time frame, current events, political rent-seeking, and intellectual mistakes can divert the long-term agenda and delay its implementation. Diversion and delay have occurred as roller-coaster commodity prices, El Niño, and the Asian financial meltdown have provided a volatile backdrop for domestic farm policy adjustments, implementation of major trade deals, and formation of the World Trade Organization (WTO).

For some countries, implementation of the 1994 WTO Agreement on Agriculture remains a major stimulus for domestic reform. For example, in South Korea the symbolic opening of the rice market and the more substantial opening of other agricultural markets caused a broad rethinking of the role of government in agriculture. This new thinking promises substantial, if gradual, reformation of Korean agricultural policy.

In the United States, gradual and intermittent movement toward more reliance on markets began about fifteen years ago, well before the WTO Agreement. This nation has reformed internal subsidy policy more than border policy, and these subsidy policy changes were clearly not a response to the WTO. The United States did not fail to comply with its WTO obligations; it was asked to do little by the WTO and has done exactly that.

The subsidy changes enacted in October 1998, however, showed how U.S. policy reform can go off course. The scramble to pass out political favors before the November election also demonstrated how little influence the WTO Agreement had on internal subsidies, how little economic understanding there is among some policy makers, and how little economic principles matter, even to some who understand the principles. Pre-election pork included generous crop insurance provisions, lucrative marketing loan payments, extra contract payments, and, to top it off, new dairy subsidies in a year of record profits. Most of these new subsidies are nowhere near "green" in an honest WTO accounting.

Reform of internal subsidy policy remains unfinished. Obviously, FAIR did not end farm programs! Our domestic policy agenda for the new decade, perhaps in a 2002 farm bill, should be to make it more difficult to reverse, as occurred in 1988, the reform path of the 1980s and 1990s.

But these domestic subsidy reforms should not be the agenda for trade negotiation. Trade negotiations ought to focus on the border and generally leave aside internal subsidies. Of course, it is easy to prove that a particular arrangement of domestic taxes and subsidies can, in theory, duplicate the effects of border policy. In practice, however, there are several reasons for the focus on the border. First, open borders place strong practical constraints on internal subsides; the most market-distorting internal subsidies are not compatible with open borders. Second, international agreements make sloppy tools for dealing with the immense variety of internal subsidies. By diverting attention away from the border, and weakening nullification and impairment tools, attempts to use trade agreements for reducing internal subsidy actually achieve less liberalization. Third, it is easier to garner political will to remove border policies when countries understand that they may continue internal support. Finally, as the U.S. example shows, progress on internal subsidies does not require international agreement.

Those favoring liberal trade should push for rapid elimination of export subsidies and import barriers. To divert efforts into arcane definitional issues of "green" or "blue" boxes or to co-opt trade negotiations to serve domestic reform agendas will cause delay and weaken the international results.

For rapid progress toward an open-market agricultural policy, we need a two-track practical approach: negotiate radical reductions in border measures through international agreements; meanwhile, eliminate distorting domestic subsidies unilaterally.

Daniel A. Sumner

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John Reilly is the associate director for research in the Joint Program on the Science and Policy of Global Change at MIT. He spent twelve years with the Economic Research Service of the U.S. Department of Agriculture, most recently as the acting director and deputy director for research of the Resource Economics Division. He has been a scientist with Battelle's Pacific Northwest National Laboratory and with the Institute for Energy Analysis, Oak Ridge Associated Universities. He was a principal author for the Intergovernmental Panel on Climate Change's Second Assessment Report.

Bruce A. McCarl is a professor of agricultural economics at Texas A&M University, specializing in natural resources and technology-related policy analysis as well as in quantitative methods. McCarl has been working on global climate change and greenhouse gas emission reduction issues since 1985.

Uwe A. Schneider, a native of Germany, is a PhD student in the Department of Agricultural Economics at Texas A&M University, where he has been focusing on environmental economics and resource management. His background is both in soil and crop science and agricultural economics as he holds master's degrees in each field. His dissertation will involve a comprehensive cost analysis of climate change mitigation strategies in the agricultural sector.

Richard L. Sandor is chairman and chief executive officer of Environmental Financial Products, L.L.C. This firm specializes in providing consulting, financing, and trading of environmental markets. Sandor is widely recognized as a founder of the interest rate derivatives markets now traded worldwide and has designed revolutionary market mechanisms for the catastrophe insurance industry and market-based solutions to environmental problems. Sandor is known for founding the Chicago Board of Trade sulfur dioxide emission allowance market. He was also the originator and co-author of the catastrophe and crop insurance futures and options contracts. He has advised leading exchanges, governments, international agencies and corporations around the world on the design and implementation of a market for greenhouse gas emissions. Sandor currently also serves as chairman of Hedge Financial, a unit of CNA Insurance, and is second vice chairman of the Chicago Board of Trade.

Jerry R. Skees is a teaching and research professor of policy and risk in the Department of Agricultural Economics, University of Kentucky. While Skees has been at the University of Kentucky since 1981, during this time he has also gained experience working in Washington, D.C., and in the private sector. In 1989, Skees was the research director for the Commission to Improve the Federal Crop Insurance Program and a visiting scholar at the Economic Research Service, USDA. For the past several years, Skees has consulted with the U.S. government, the World Bank, and private firms in the capital markets. In addition to authoring numerous scholarly journal articles, Skees is co-author of the award-winning book, "Sacred Cows and Hot Potatoes: Agrarian Myths in Agricultural Policy." He is also a recent recipient of the Outstanding Teacher award from the Southern Agricultural Economics Association.

B. Delworth Gardner is professor emeritus of economics at Brigham Young University and professor emeritus of agricultural economics at the University of California at Davis. He spent the 1997–98 school year at the Foreign Affairs College in Beijing—the first Western economist to teach courses in economic theory and development at this college specializing in international relations—and presented two seminars, one on water development and allocation, and the other on the American experience with various agricultural policies. It was at these seminars, arranged by Professor Yaohui Zhao, that the two discovered common interests and decided to write the article in this issue.

Yaohui Zhao is associate professor of economics at the China Center for Economics at Beijing University. She received her PhD from the University of Chicago, and joined the faculty of Beijing University (where she obtained her BA and MA degrees) in 1996 after teaching at George Washing-

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ton University for three years. She has worked on various issues in rural China, including rural enterprises, labor mobility, education, support for the elderly, and land ownership.

Dermot Hayes, professor of economics at Iowa State University, serves as professor in charge of the university's Meat Export Research Center and is head of the Trade and Agricultural Policy Division at the Center for Agricultural and Rural Development (CARD) at Iowa State. Hayes received his PhD from the University of California, Berkeley, and his bachelor's degree in agricultural science from University College in Dublin, in his native Republic of Ireland.

Alan Randall is a professor of agricultural, environmental, and development economics at The Ohio State University, and recently became chair of the department. He has been writing about externality and market failure since his dissertation research at Oregon State University in 1970. Since then, he has continued to concentrate on natural resource and environmental economics. He is no stranger to the policy arena, having been prominent in the controversies about assessment of damage from the *Exxon Valdez* oil spill, and on several National Research Council panels dealing with environmental policy issues. Through these experiences, Randall maintains he is much more conscious, now, of the precarious position of economists in the policy process and the concommitant need of economists to understand and respect the various and quite different world views of the other participants.

Don Paarlberg is professor emeritus in the Department of Agricultural Economics at Purdue University. While one-half of Paarlberg's professional life has been devoted to teaching and research at Purdue, the other half has been spent in federal service. He has held appointments for three presidents, Eisenhower, Nixon, and Ford, having been assistant to the president (1958–60), coordinator of the Food-for-Peace Program (1960), assistant secretary of agriculture (1957–58 and 1976), director of agricultural economics in the U.S. Department of Agriculture (1969–76), member of the Board, Commodity Credit Corporation (1953–58 and 1969–76), and chairman of the USDA Graduate School (1969–76). Paarlberg is now self-employed, with writing, speaking, and consulting engagements.

Sergio H. Lence is associate professor of economics at Iowa State University. His areas of interest are risk management, decision making under uncertainty, agricultural marketing, agricultural finance, and asset prices. He has published extensively on these topics, worked as a commodity market analyst at the Argentine Grain Board, and has served as a consultant and expert witness in several hedge-to-arrive cases. These experiences and those of his co-authors serve as a basis for the article in this issue.

Marvin L. Hayenga is professor of economics at Iowa State University, specializing in agricultural marketing. He was formerly visiting professor of agricultural economics at the University of Wisconsin, corporate agricultural economist at General Foods Corporation, and associate professor of agricultural economics at Michigan State University. He also served as visiting professor at the University of California-Davis and at Renmin University in China. Hayenga has served as consultant to a large number of agribusinesses, industry organizations, government agencies, and law firms. He served as agricultural marketing and futures market consultant and expert witness in several hedge-to-arrive cases.

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