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THE MAGAZINE OF FOOD, FARM, AND RESOURCE ISSUES

CHOICES

Third Quarter 1999

The Endangered Species Act

Economics and the Reauthorization Debate

Findings

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

- **Income Taxes and Commodity Prices.** Progressive income taxes, in contrast to a flat-tax policy, discourage commodity storage and increase commodity price variability—say McNew and Gardner.

- **Salmon Prices.** Prices of farmed Atlantic salmon determine the price of all species of wild Pacific salmon, and improved productivity of farmed salmon will likely cause all salmon prices to fall—say Asche, Bremnes, and Wessells.

- **China's Wheat Consumption.** Per capita consumption of wheat in rural areas of China, where most of China's population lives, may not grow very much in the future, and may actually fall—say Carter and Zhong.

- **Environmental Conditions Affect Property Values.** A Dallas smelter depressed nearby residential property values, as has happened in other environmentally stigmatized locations, but property values rebounded after cleanup—say Dale, Murdoch, Thayer, and Waddel.

- **Taxes on Phosphate Fertilizer.** A tax on phosphate fertilizer would cause lower transactions costs (such as costs of government program administration) than would several other alternatives to reduce agricultural phosphorous pollution in the Minnesota River—say McCann and Easter.

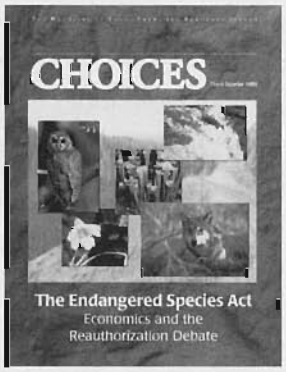
- **Rangeland Reform.** Rangeland reform based on land condition can better meet both public and rancher goals than can proposed across-the-board rangeland policies—say McCluskey and Rausser.

- **Grading Prunes.** Grading errors reduce incentives for California growers to produce more valuable, larger prunes—say Chalfant, James, Lavoie, and Sexton.

- **Low-Input Dairy Farming.** The profitability of low-input (pasture-based) versus more conventional dairy production depends on seasonal forage production capacity, milk prices, haying costs, and the price of purchased supplements—say Tozer and Huffaker.

- **Generic Advertising.** Generic advertising of traded goods may be less profitable than suggested by previous studies—says Kinnucan.

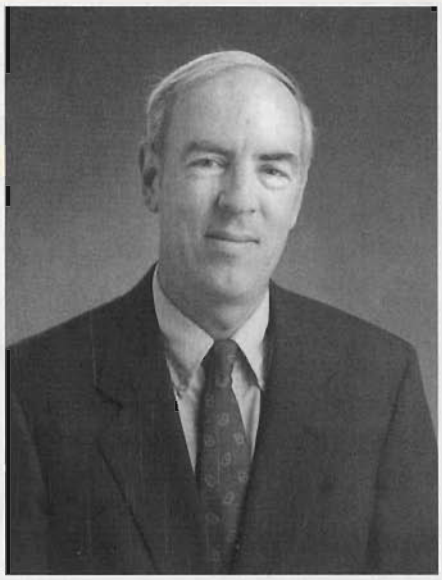
*Findings are taken from recently or soon-to-be published research in the *American Journal of Agricultural Economics, Review of Agricultural Economics, Journal of Agricultural and Resource Economics, Journal of Agricultural Economics, Journal of Agricultural and Applied Economics, Agricultural and Resource 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 43.



ON OUR COVER—Salmon and spotted owls, wolves, green pitcher plants, and oconee bells—these are but a small sampling of the more than 1,200 species that U.S. Fish and Wildlife currently lists as endangered. In this issue, authors examine, through the scope of economics, the species and habitats in question—and the intense "protections versus property rights" debate surrounding the Endangered Species Act.

by Peter J. Barry ■ **Guest Editorial**

Risk Management and Safety Nets for Farmers



Peter J. Barry is professor of agricultural finance at the University of Illinois and chair of the Council on Food, Agricultural, and Resource Economics (C-FARE).

U.S. farm policy historically has provided several mechanisms to assist farmers in managing risks. These mechanisms include (*a*) deficiency payments and acreage setasides, (*b*) price supports and commodity loans, (*c*) credit liquidity through direct and guaranteed loans, (*d*) crop and revenue insurance, and (*e*) tax allowances for cash accounting and income averaging. The budget-driven 1996 farm bill substantially reduced the deficiency payment and acreage set-aside portion of this package, with culmination to follow after seven years of risk-free transition payments to eligible farmers. In return, farmers are largely free to produce, market, and compete on their own merits.

Most observers expected greater variability in commodity prices and farm income to result from the 1996 legislation. In response, farmers, together with innovative market firms and "friendly" bankers, would learn to manage these risks on their own. The rewards would be higher expected incomes.

Not surprisingly, the agricultural cycle has continued. After several good income years, 1998–99 brought large downturns in prices for many commodities, in part reflecting high production and carryover stocks resulting from farmers' "freedom" to farm. Perhaps equally not surprising, the federal government eschewed its new, disciplined policy approach, and quickly pumped billions of dollars of additional financial assistance into the farm sector. The experiment with farmers managing price risk on their own was indeed short-lived. It is hard not to plan on government assistance when it comes so easily.

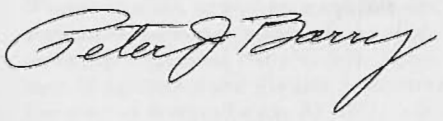
The longer-term policy implications of this risk-bearing problem involve three key questions: (*a*) Do farmers lack risk-bearing alternatives? (*b*) If so, should public policy respond? and (*c*) With what response-mechanisms should public policy respond?

Identifying gaps in risk bearing requires a holistic assessment of farmers' risk management options. The options are numerous, including enterprise diversification, protective production practices, vertical integration, production and marketing contracts, hedging and option contracts, financial reserves maintainance, leverage and liquidity management, lender relationships, share leases and custom work, information investment, off-farm employment, insurance, and government programs utilization. Many of these options require careful planning and considerable time and effort. Not all options work for all farmers.

Even with all these available options, many farmers remain vulnerable to extreme adversity, especially attributable to large global production changes and foreign currency fluctuations; lack of supply controls for crops, comparable to cyclical production patterns in livestock; and insurance-related difficulties, including the lack of independence of income variability across farmers and over time, and adverse selection and moral hazard problems. These vulnerabilities seem greater for commercial-scale family farms, as opposed to large industrialized units that can internalize more risk-bearing services, and small units, many of which rely on off-farm income. Whether innovations in private risk bearing will fill the vulnerability gap remains to be seen.

A middle policy ground for farmers' risk management thus may include continued government involvement in the form of insurance, and contingent financial reserves which farmers can build in good years and draw down in lean years. Under such approaches, farmers would pay for part of their risk protection through the stockpiling of insurance and financial reserves, for use under adversity. The financial reserves might involve tax-deferred attributes. Risk-sharing mechanisms can be explored to ensure that risk bearing shifts to parties who can bear it most efficiently. The Economic Research Service and the Risk Management Agency of the U.S. Department of Agriculture, along with other analysts, have continued to study and experiment with these options.

Combining the risk-bearing services of insurance, commodity, and financial markets through holdings of contingent reserves, securitization of insurance contracts, or other means is a novel approach. The details are complex, but the long-term payoffs appear promising. Making policy options a systematic and reliable part of farmers' risk management would reduce the vulnerability gap and harness the tendency to wheel money out the political door whenever farm adversity strikes. It would also reduce policy uncertainty as a major source of risk for farmers.



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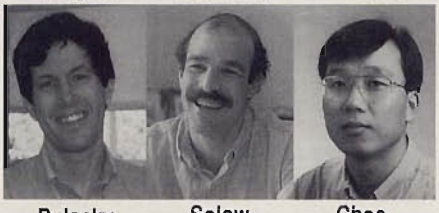
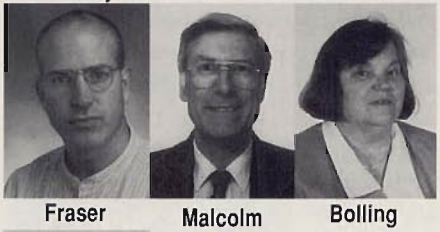

Polasky Solow Choe


Fraser Malcolm Bolling

Handy

Jason Shogren is the Stroock Distinguished Professor of Natural Resource Conservation and Management, and professor of economics at the University of Wyoming. Before returning to his alma mater, he taught at Appalachian State, Iowa State, and Yale. In 1997, Shogren served as the senior economist for environmental and natural resource policy on the President's Council of Economic Advisers. This experience turned him into a political animal—hardly an endangered species, but nonetheless an otherworldly creature. As such, Shogren was invited to brief the eighteen western governors at their annual WGA meeting this past June on the political economy of endangered species on private land.

John Tschirhart is professor of economics and director of the Public Utility Research and Training Institute (PURTI) at the University of Wyoming. He was chairman of the department from 1982–85. He is past chairman of the Transportation and Public Utility Group of the American Economic Association. He has consulted for numerous organizations, including the U.S. Department of Energy, the Electric Power Research Institute, the seven regional Bell Companies, the Minnesota Pollution Control Agency, the United Nations, and the World Bank. He is currently coeditor of the PURTI *Research Summaries*, a publication that summarizes academic research on public utilities for noneconomists.

Robert Innes is professor of agricultural and resource economics at the University of Arizona, where much of his research focuses on microeconomic theory, industrial organization, finance, agricultural policy, environmental economics, and law. Innes served as a senior economist on the President's Council of Economic Advisors in 1994–95 with responsibility for agricultural, natural resource, and international trade issues.

Starting this fall, **Stephen Polasky** will be the Fesler-Lampert Professor of Ecological/Environmental Economics at the University of Minnesota. This past year he worked on environmental and resource policy issues as a senior economist on the President's Council of Economic Advisers. Prior to that, he was an associate professor in the Agricultural and Resource Economics Department at Oregon State University. His research includes work analyzing conservation incentives for private landowners under the Endangered Species Act, determining priority areas for conservation and measures of biological diversity.

Andrew Solow is an associate scientist and director of the Marine Policy Center at the Woods Hole Oceanographic Institution. Solow's area of research is ecological and environmental statistics. His recent work has focused on problems connected to the extinction of ancient and modern species and, with co-author Polasky, decision making in the conservation of biological diversity. Solow is a member of the National Academy of Sciences Commission on Geosciences, Environment, and Resources.

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Iain Fraser is a lecturer in the Department of Economics and Finance at La Trobe University, Melbourne, Australia. Currently he is a visiting lecturer in the Department of Agricultural and Resource Economics at the University of California-Berkeley. Fraser was previously a lecturer in economics at the Manchester Metropolitan University, Manchester, United Kingdom. Areas of research emphasis include household waste management, natural resource, accounting, and agri-environmental policy design and implementation.

John Malcolm worked for many years for the National Farmers' Union of England and Wales, most recently as chief economic adviser, and prior to that, as head of the Crops Department. There he led the European farmers' team in lengthy negotiations with the EU Commission and European plant breeders over payments for intellectual property rights, and coordinated the Union's input into reform of Common Agricultural Policy in the crops sector. He is currently European Union policy adviser to the Hungarian Ministry of Agriculture and Regional Development, as well as associate lecturer (part-time) in economics at the U.K.'s Open University.

ERS agricultural economist **Christine Bolling** has written on a variety of subjects related to agricultural trade and investment during her thirty-year career, most published as USDA monographs. She has been an area specialist on Eastern Europe and Latin America, and has written about agricultural trade, international commodity prices, and, more recently, about foreign direct investment in agriculture and food processing. She traveled to Mexico recently on information-gathering trips under the auspices of the USDA Emerging Markets Project.

Javier Calderon Elizalde is an economist with the Agricultural Sector Studies Directorate, Ministry of Agriculture, Mexico. His interests are in agricultural production and in foreign direct investment in agriculture and agribusiness. (Photo unavailable.)

Charles Handy is a senior agricultural economist with the Economic Research Service, USDA. He has spent his career at the ERS conducting research and policy analysis on the structure and performance of the U.S. and global agri-food systems from farm inputs to the food processing and distribution sectors, and has published extensively on these topics. His recent research has focused on the globalization of the food system and alternative strategies companies use to access international markets, including foreign direct investment, trade, and licensing.