

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
http://ageconsearch.umn.edu
aesearch@umn.edu

Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.

AGRICULTURAL ECONOMICS RESEARCH



Economic Research Service ECONOMIC RESEARCH SERVICE REFERENCE CENTER

AUG 11 1993

Articles

- Partial vs. General Equilibrium Analysis of Trade Policy Reform
- Alternative Forms for Production Functions of Irrigated Crops
- Evaluating Orange Growers' Exercise of Market Power with Marketing Order Volume Control Regulations

Book Reviews

- Economics of Food Safety
- Multiple Job-holding among Farm Families
- Economic Logistics: The Optimization of Spatial and Sectoral Resource, Production, and Distribution Systems
- Environmental Policy and the Economy
- Commodity Advertising and Promotion
- The Political Economy of Agricultural Trade and Policy: Toward a New Order for Europe and North America

Editors

James Blaylock David Smallwood Jım Carlın

Graphics Designer Susan DeGeorge

Editorial Board

Ron Fecso William Kost Fred Kuchler Bob Milton Kenneth Nelson Mindy Petrulis Gerald Schluter Shahla Shapouri Noel Uri Gene Wunderlich

This periodical is published quarterly Subscription rates are 1 year, \$16, 2 years, \$30, 3 years, \$44 Non-U S orders, please add 25 percent Send check or money order (payable to ERS-NASS) to ERS-NASS 341 Victory Dr Herndon, VA 22070

or call 1-800-999-6779 periodical is also available from the US Government Printing Office-(202) 783-3238

The Secretary of Agriculture has determined that the publication of this periodical is necessary in the transaction of public business required by law of this Department Use of funds for printing this periodical has been approved by the Director, Office of Management and Budget

Contents of this journal may be reprinted without permission, but the editors would appreciate acknowledgment of such use

Contents

1 In This Issue James Blavlock David Smallwood

Articles

- 3 Partial vs. General Equilibrium Analysis of Trade Policy Reform Thomas W Hertel
- 16 Alternative Forms for Production Functions of **Irrigated Crops** Michael R Moore, Noel R Gollehon, and
- 33 Evaluating Orange Growers' Exercise of Market Power with Marketing Order Volume Control Regulations

Donald H Negri

Nicholas J Powers

Book Reviews

- 43 Economics of Food Safety Reviewed by Phil R Kaufman
- 44 Multiple Job-holding among Farm Families Reviewed by Leslie A Whitener
- 46 Economic Logistics: The Optimization of Spatial and Sectoral Resource, Production, and **Distribution Systems** Reviewed by David Letson

- 48 Environmental Policy and the Economy Reviewed by John K Horowitz
- 49 Commodity Advertising and Promotion Reviewed by Gary W Williams
- 51 The Political Economy of Agricultural Trade and Policy: Toward a New Order for Europe and North America

Reviewed by Mark V Simone

In This Issue

The analysis can be extended to any degree of refinement, but the more complicated the question the more cumbersome the analysis. In order to know anything it is necessary to know everything, but in order to talk about anything it is necessary to neglect a great deal. Joan Robinson (1941)

Economists are often caught in an awkward dilemma accused of simplifying problems away or complicating them beyond comprehension. The demands of analyzing real world problems often require that we lean toward complexity if our results are to be taken seriously. But, complexity will often lead to the familiar accusation that we are living in an ivory tower. Some middle ground must be sought

The three articles in this issue illustrate that a compromise between simplicity and complexity sometimes yields insights and solutions to problems that would otherwise remain hidden. This should be the goal of most applied economic research.

The lead article by Tom Hertel builds a persuasive case for using general equilibrium instead of partial equilibrium models for analyzing agricultural trade issues. The past decade has seen a great deal of activity in the quantitative analysis of agricultural trade with the high profile of agriculture in the Uruguay Round of GATT negotiations focusing international attention on the consequences of domestic farm policies for world trade Given this stage, Hertel studies two questions First, what happens to global food sales if farm and food policies as well as nonfood trade interventions are liberalized but the European Community's Common Agricultural Policy is kept in place and second, what happens if the EC's food policies are also reformed? Hertel's conclusion is that agricultural and nonagricultural interests in trade cannot be separated Consequently, the avenue to global, agricultural reform requires the involvement of all interest groups, whether they represent food or nonfood sectors

The research by Moore, Gollehon, and Negri helps establish a foundation for evaluating irrigation water conservation and input substitution by estimating irrigated crop production functions using farm-level observations. Their analysis covers 13 irrigated crops with data from 17 Western States For each crop, results include output elasticities of irrigated water, returns to scale, and the marginal rate of technical substitu-

tion between land and water Their results have one immediate policy implication since output elasticities for irrigation water are very inelastic for each crop examined, faimers should be able to mitigate many of the production impacts of water conservation efforts

Nick Powers illustrates how to measure the exercise of market power by growers who can influence quantities sold to selected markets via a Federal marketing order. He uses the Federal marketing order for California-Arizona navel oranges that authorized handler prorates, enabling the industry to establish a weekly maximum amount for shipment as a case study. Powers finds that growers exercised some market power (but not complete monopolistic power) via marketing order prorates prior to 1983 but have exercised less power since 1983 when a policy curtailing growers' use of prorates was established.

Gary Williams finds much to recommend the book, Commodity Advertising and Promotion, edited by Kinnucan, Thompson, and Chang Williams thinks this collection of papers from a recent conference plays a valuable role by organizing into a single volume the most recent research on a wide range of issues related to generic promotion. He argues that the book would be a valuable addition to the library of anyone involved in promotion activities, ranging from those evaluating advertising effectiveness to policymakers and producer groups

John Horowitz gives the book, Environmental Policy and the Economy, edited by Dietz, van der Ploeg, and van der Straaten, a slightly downbeat assessment. He believes this collection of conference papers is a mixed bag, most papers being weak, but some containing noteworthy analysis. It is only as a comprehensive picture of a broad topic that this book comes close to succeeding and, perhaps, justifying its purchase or a reader's time

David Letson enthusiastically endorses Thore's Economic Logistics The Optimization of Spatial and Sectoral Resource, Production, and Distribution Systems Letson believes that Thore's economics is an aggregation of models of individual producers, shippers, and warehouses all coming together to form a logistical system solving for optimal market prices and quantities The book provides a synthesis of mathematical programming with a creative demonstration of its capabilities Thus, it is well-suited for the graduate classroom, and for everyone else "it is a reminder of tools

developed over the past half-century and their power when in creative hands"

Phil Kaufman concludes that *Economics of Food Safety*, edited by Julie Caswell, fills a void in the literature but is not without a few blemishes. He finds the collection of papers to be an excellent sampling of current research issues and applications that will help both economists and policymakers to understand food safety concerns. He indicates that the volume is an ambitious beginning and will motivate other researchers to fill in the gaps. Kaufman also feels that chapters stressing research methods rather than the empirical aspects of food safety analysis may have limited appeal to lay readers and policymakers.

Mark Simone describes The Political Economy of Agricultural Trade and Policy Toward a New Order for Europe and North America, edited by Michelmann, Stabler, and Storey, as accessible,

generally devoid of equations, but lacking much new information to serious students of the Uruguay Round of GATT negotiations. The collection may be most useful to those wishing to understand the agricultural policy process in a number of different countries. Given the 1990 collapse of GATT negotiations, which postdates publication of this volume, Simone would be interested in having these same authors discuss regional trade issues.

Multiple Job-holding among Farm Families, edited by Hallberg, Finders, and Lass, is reviewed by Leslie Whitener She thinks the book, an updated overview, is a must-read for analysts embarking on research studies. However, it falls short in identifying gaps in the current literature and in suggesting future research and policy directions. Whitener suggests that the book, while not complete, is a good start.

James Blaylock David Smallwood