



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

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.*

The Journal of

AGRICULTURAL ECONOMICS RESEARCH

Vol 45, No 1



United States
Department of
Agriculture

Economic
Research
Service

Articles

- Consumer Awareness of Diet-Disease Relationships and Dietary Behavior: The Case of Dietary Fat
- The Implications of Offsetting Adjustments in Government Purchase Prices for Butter and Nonfat Dry Milk
- Cost, Supply, and Farm Structure: A Pedagogical Note

Book Reviews

- Agricultural Trade: Principles and Policies
- Market Demand for Dairy Products

Editors

James Blaylock
David Smallwood
Jack Harrison

Graphics Designer

Susan Yanero

Editorial Board

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

This periodical is published quarterly. Subscription rates are 1 year, \$16, 2 years, \$30, 3 years, \$45. 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. This periodical is also available from the U S 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.

The United States Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, and marital or familial status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (braille, large print, audiotape, etc.) should contact the USDA Office of Communications at (202) 720-5881 (voice) or (202) 720-7808 (TDD).

To file a complaint, write the Secretary of Agriculture, U S Department of Agriculture, Washington, D C, 20250, or call (202) 720-7327 (voice) or (202) 720-1127 (TDD). USDA is an equal employment opportunity employer.

Contents**1 In This Issue**

James Blaylock
David Smallwood

Articles

3 Consumer Awareness of Diet-Disease Relationships and Dietary Behavior: The Case of Dietary Fat
D S Putler and E Frazao

18 The Implications of Offsetting Adjustments in Government Purchase Prices for Butter and Nonfat Dry Milk
Larry Salathe

27 Cost, Supply, and Farm Structure: A Pedagogical Note
Lloyd D Teigen

Book Reviews

33 Agricultural Trade: Principles and Policies
Reviewed by Fred J Ruppel

35 Market Demand for Dairy Products
Reviewed by Olan D Forker

In This Issue

"Thus it may appear, that there ought to be a great reciprocal influence between the mind and alimentary duct" David Hartley, **Observations on Man** (1749)

Despite a growing body of medical evidence linking diet with a number of diseases, many people have not changed their eating habits. Many reasons for this inaction have been cited, but little empirical evidence is available. Is the slow progress toward more healthy eating and lifestyles due to a lack of knowledge about nutrition and the nutrient content of foods, unawareness of diet-disease relationships, or perhaps simply an unwillingness to change? What does seem clear is that we need to go beyond traditional economic models of consumer demand for answers.

The fact remains that people buy foods that contain substances, some good, some harmful if eaten in excess. Economists have studied food choices for many years using classical demand theory as a guide. This theory and its extensions basically postulate that food choices are determined by prices, income, and the socio-economic characteristics of individuals. Clearly, other, more subjective influences, such as knowledge and attitudes, are at work—but usually ignored. Society, in turn, will bear enormous opportunity costs if we do not break the chains that bind us to traditional types of analyses.

The lead article in this issue takes a step forward by recognizing that awareness of diet-disease relationships may help explain a woman's fat intake. The authors, Dan Putler and Betsy Frazao, first estimate a model designed to examine how the probability of diet-health awareness varies with the demographic profile of the surveyed women. They then use this probability along with other variables to construct a model of fat intake. Despite systematic changes in food consumption associated with higher awareness probabilities, the more-aware women showed no greater reduction in fat intake than others. The authors postulate that difficulties in making effective food substitutions may be due to insufficient knowledge about the relative fat content of different foods. This research represents a first step on a long journey.

Larry Salathe's article, "The Implications of Offsetting Adjustments in Government Purchase Prices for Butter and Nonfat Dry Milk," develops a model that could be used to improve the operation of

USDA's dairy price support program. Since 1988, Commodity Credit Corporation purchases of milkfat have greatly exceeded purchases of nonfat milk solids. USDA has responded by reducing the purchase price of butter and raising the purchase price of nonfat dry milk twice in 1990 and twice in 1992. Salathe develops a model that derives offsetting adjustments in butter and nonfat dry milk prices that would balance CCC purchases of these two commodities on a milk equivalent basis and minimize CCC purchase costs. Applying the model to the 1991 market situation suggests that CCC's purchase price of butter would have had to be reduced 35-40 cents per pound before purchases would have been equal on a milk equivalent basis. Salathe concludes that this balancing would have reduced CCC dairy purchases by about \$125 million in 1991.

Lloyd Teigen's article, "Cost, Supply, and Farm Structure: A Pedagogical Note," reminds us of the importance of truly understanding the linkage between basic microeconomic theory of the firm and the real world. Teigen argues that textbook cost curves for "representative" firms are drawn too close together and thus fail to illustrate the wide diversity of technologies that often exist among firms. He goes on to show just how powerful simple microeconomic principles can be in understanding industry structure and trends. Using the dairy industry as an example, he applies the quadratic production function and derives all the related marginal and average cost, supply, and input demand functions. Explicit aggregation from firm to market shows that properly specified aggregate functions depend on the distribution and number of firms.

In the first of two book reviews, Olan Forker says that *Market Demand for Dairy Products*, edited by Johnson, Stonehouse, and Hassan, contains a "wealth of information" on demand analysis for dairy products, including alternative theories and methods of analysis, market demand studies for various dairy products, and the impact of generic advertising. Forker recommends the book as a reference for academicians, researchers, and students, as well as dairy industry participants.

Fred Ruppel has mixed feelings about Luther Tweeten's new book, *Agricultural Trade: Principles and Policies*. Ruppel reports that the text is probably too advanced for some of its intended audiences, in particular, the general public and

even some upper-division undergraduate courses. While some chapters would be useful to these groups, he feels that most chapters and topics are much too advanced in their presentation style and content for these two groups. His assessment is that the text is geared to professional economists and agricultural economists working on trade

issues. He feels the major contribution of this book is in the trade and agricultural policy arena rather than trade theory, a big plus for us working in the real world!

James Blaylock
David Smallwood