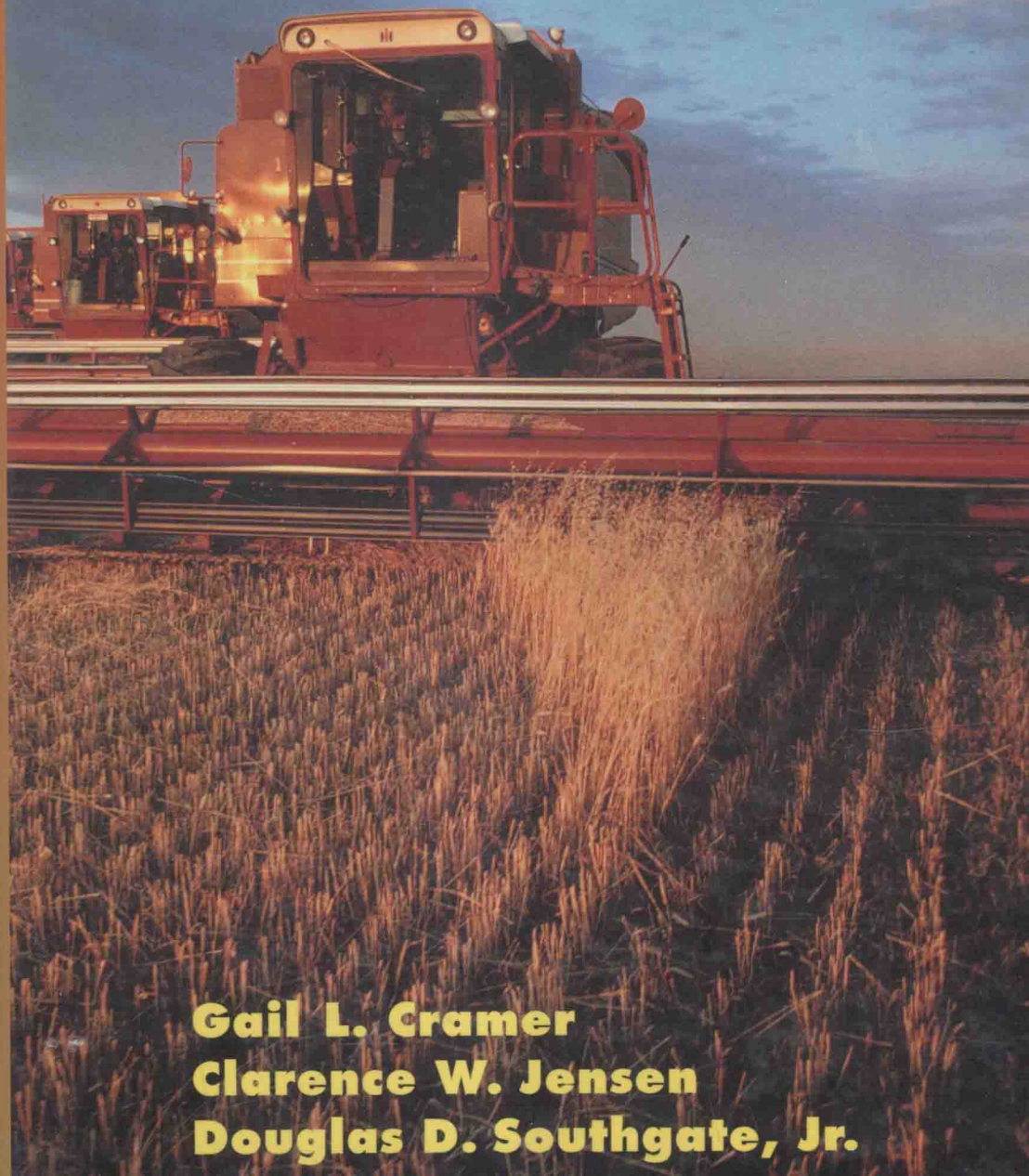


Agricultural Economics and Agribusiness

SEVENTH EDITION



**Gail L. Cramer
Clarence W. Jensen
Douglas D. Southgate, Jr.**

Seventh Edition

AGRICULTURAL ECONOMICS AND AGRIBUSINESS

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To Our Families

Marilyn, Karilee, and Bruce Cramer

Elaine, Marcia Logan,

Daryll and Kathy Jensen

Myriam, Elizabeth, and Richard Southgate

About the Authors



Gail L. Cramer is currently L. C. Carter Chair Professor in the Department of Agricultural Economics and Rural Sociology at the University of Arkansas, a position he has held since 1987. He attained his Bachelor's degree in 1963 from Washington State University, his Master's degree from Michigan State University in 1964, and his Ph.D. in Agricultural Economics from Oregon State University in 1967.

In 1967, Gail Cramer was appointed Assistant Professor in the Department of Agricultural Economics and Economics at Montana State University. He was promoted to Associate Professor in 1972 and to Full Professor in 1976. While at Montana State University, he taught courses in advanced, intermediate, and beginning microeconomics, agricultural marketing and agricultural policy. He won four teaching awards at Montana State University including the Phi Kappa Phi University-Wide Award in 1980.

Primary research assignments are in wheat and rice marketing. He has published over 170 journal articles and other publications in the general area of grain marketing. Cramer won the E. G. Nourse Award for his outstanding Ph.D. dissertation on Cooperative Mergers. Other awards include the 1980 award for "Excellence in Quality of Communication" for

Agricultural Economics and Agribusiness with Clarence W. Jensen by the American Agricultural Economics Association. This book has been translated into Spanish, Malaysian, Chinese, and Russian. Also, Cramer received the Rice Technical Workers' Research Award for the outstanding rice research program in 1992 jointly with Dr. Eric J. Wailes at the University of Arkansas. In 1992, Cramer was selected for the Distinguished Faculty Award for Research and Public Service from the Arkansas Alumni Association. His research is domestic and international in scope. His rice research has taken him throughout the world, and he has presented seminars on his research in the Philippines, Japan, Indonesia, Mexico, Taiwan, Australia, Hong Kong, Singapore, Egypt, and England.

In 1990, Cramer was one of the principal founders of the International Agribusiness Management Association, which was incorporated in Arkansas in 1990. He was instrumental with Mike Woolverton in forming *Agribusiness: An International Journal* published by John Wiley and Sons, New York in 1985 and is one of the leading journals in agricultural economics. In addition, he served on the White House Agribusiness Commission, which was useful in expanding the number of undergraduate and graduate programs in agribusiness.

Cramer is married to the former Marilyn Jean Karlenberg and they have two grown children—Karilee and Bruce.



Clarence W. Jensen is currently Professor Emeritus in the Department of Agricultural Economics and Economics, an appointment he has enjoyed since 1980.

He attended Montana State College where he was granted Bachelors and Masters degrees in Agricultural Economics and Economics in 1951 and 1952. Further graduate work at Michigan State University was completed, where he received the Ph.D. degree in Agricultural Economics and Economics in 1958.

In 1955, Clarence Jensen was appointed Assistant Professor in the Department of Agricultural Economics and Economics at Montana State University, then was appointed to Associate Professor in 1959 and Full Professor in 1961. He later served as Department Head from 1966 to 1968.

At Montana State University, Jensen taught a wide variety of courses in Agricultural Economics and Economics (Economics of American Agriculture; Farm and Ranch Management; Economics of Natural Resources; Advanced Farm and Ranch Management; Agricultural Production Economics; Advanced Production Economics; General Economics; Microeconomic Principles; Intermediate Economics; Public Finance; Welfare Eco-

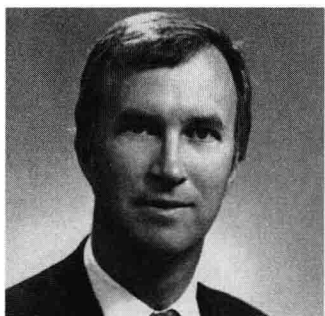
nomics; and Managerial Economics) at both the undergraduate and graduate levels. He also was Advisor for many of the department's undergraduate majors, and served on numerous graduate committees as Chairman or committee member.

Research assignments were generally in the areas of agricultural and natural resource management and productivity, production economics, costs and returns in farming and ranching, and the economics of water resource development and use. A sizable number of publications resulted from those research efforts.

During his tenure at Montana State University, Jensen served as Consultant to the Bureau of Land Management, and with visiting research appointments at Texas A&M University's Water Resources Institute, Winrock International, and L. C. Carter Rice Institute at the University of Arkansas.

Jointly with Gail Cramer, Jensen earned the 1980 Award for "Excellence in Quality of Communications" by the American Agricultural Economics Association for the first edition of our book *Agricultural Economics and Agribusiness*, now in its sixth edition.

Clarence Jensen married the former Elaine D. Johnson in September 1944. They have two children, each now with families of their own.



Douglas D. Southgate, Jr. is a professor of agricultural economics at Ohio State University, where he also directs the International studies Center and the Latin American Studies Program. He was awarded a bachelor's degree in economics by the University of Oregon in 1974 and was elected to Phi Beta Kappa. He completed his Ph.D. in agricultural economics at the University of Wisconsin, and the same year joined the faculty at Ohio State. He was promoted to associate professor in 1986 and to full professor in 1995.

A natural resource economist, Dr. Southgate specializes in the study of environmental problems in Latin America. He has published three books and a large number of journal articles and scholarly papers addressing the causes and consequences of tropical deforestation, the economics of watershed management in developing countries, and related topics. Since the early 1980s, he has consulted in twelve Latin American nations for the World Bank, the Inter-American Development Bank, the United States Agency for International Development, and the Ford Foundation.

In 1987, Dr. Southgate held a Fulbright Research Fellowship in Ecuador. He returned to that country in 1990 for a three-year Joint Career Corps assignment with the United States Agency for International Development. His primary duty was to provide advice on natural resource policy. From 1988 to 1990, he served on the Tropical Ecosystems Directorate of the United States "Man and the Biosphere Program."

Dr. Southgate is married to Myriam Anota Posso, and they have two children, Elizabeth and Richard.

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Preface

Agriculture is front-page news. On any given day, we may read of large grain or fiber sales, food shortages or surpluses, farm strikes, meat boycotts, trade embargoes, tariffs and import quotas, or export subsidies. Such events have significant impacts on human beings, both domestically and internationally, and can be understood and predicted better with sound training in agricultural economics and agribusiness, especially when supplemented by a good background in technical agriculture.

This book examines the structure and organization of the agricultural industry, then discusses basic micro- and macroeconomics principles as they apply to agriculture. Principles of economics are used to demonstrate to the student that theory actually makes reality more understandable. Theory allows us to abstract from the workaday world in order to simplify real-world problems so they can be examined, explained, and understood.

The material in this text is designed for a one-quarter or one-semester class in an introductory agricultural economics or agribusiness course. If all the applied chapters are covered with some outside reference work, however, it can be used for a two-quarter sequence.

Two different routes can be taken in going through the material in this book. For a freshman-level course, we recommend covering Chapters 1, 2, 3 (excluding indifference curve analysis), 4, 5 (excluding Chapter 5's appendix), 6, 7, 8, 9, and then selecting preferred applied chapters. In a

sophomore-level course, we recommend full coverage of all theory chapters before dealing with the applied chapters.

We are interested in presenting the basic economic concepts appropriate to the agricultural industry in a clear and understandable manner. Many general economics textbooks have been able to accomplish this goal with respect to other industries. Agriculture, however, is a unique area of study with its own characteristics and opportunities. Moreover, we feel that students interested in agriculture should have a textbook directly relating to their profession. This book provides the necessary background for more advanced agricultural economics, agribusiness, and economics courses.

We have prepared the seventh edition with a number of special targets in mind: to produce a book whose size alone neither overwhelms the student nor inhibits the instructor making his or her own contribution to the class; to make the necessary topical revisions; to update relevant agricultural data; to clarify concepts that students have found to be especially difficult; and to maintain the coverage of macroeconomics and its linkages to agriculture. The reader can readily identify specialized words and terms, as each is set in boldface italics at its first mention. A section at the end of each chapter lists again those same words and phrases as a reminder of their importance.

Recent changes in U.S. domestic agricultural policy and this nation's trade relations with other countries have been included here. The financial crisis in agriculture and its credit institutions has resulted in a number of changes throughout the credit delivery system. Although these are likely not yet complete, legislated system changes as of mid-1996 have been incorporated in this edition.

Much more difficult to identify are the recent developments in command economies. Major institutional changes are underway in the Soviet Union and the People's Republic of China, and we track these as best we can where recent information permits.

Both the field and the literature of agricultural economics and agribusiness have grown because of the significant contributions of a great many people in the profession. At the end of each chapter, we give a brief biographical sketch of an individual who has made a major contribution to the literature in agricultural economics and agribusiness.

An *Instructor's Manual* accompanies this edition. For each chapter there is (1) a brief summary of the chapter; (2) a suggested lecture outline; (3) a list of economic terms that can serve both as key points for emphasis in going through the chapter material and as a source of essay questions requiring written answers; and (4) a core group of 15 true-false and 15 multiple-choice questions (all with correct answers provided) to help speed the task of preparing quizzes and exams. We also include dupli-

cate transparencies of all graphs in the text that can be used with an overhead projector, as a lecture aid.

A *Student's Study Guide* has also been prepared to accompany this edition. Each chapter in the *Study Guide* is keyed to the text, briefly summarizing the basic economic concepts to expedite the student's grasp of agricultural economics and agribusiness. As with the *Instructor's Manual*, the *Study Guide* also contains chapter outlines; lists of economic and specialized words and terms for written-answer testing; and a number of test questions—fill-in, true-false, multiple choice, and problem exercise—to aid the student in reviewing and preparing for exams, with an answer key at the end of each chapter.

It is impossible to write a book without the help and contributions of many people. We owe a large debt to our instructors and to the authors of other textbooks. We cannot thank everyone who has been of help to us, but we would like to single out a few people who have been of direct assistance to us in the preparation of this book. Dr. John M. Marsh reviewed many of the original chapters, Dr. Dan Dunn gave freely of his assistance in expanding and updating Chapter 10, and Larry Simmons reviewed and made suggestions to improve the macroeconomics chapter. Marilyn Cramer reviewed and also typed the rough drafts of many of the chapters. Our colleagues at the University of Arkansas, Montana State University, and The Ohio State University have given us continued encouragement, and Dr. J. C. Headley, Head of Agricultural Economics and Rural Sociology at the University of Arkansas, has supported this project in many ways.

We are indebted for many valuable suggestions made by John Adrian of Auburn University; Kenneth Boggs of the University of Missouri—Columbia; James Garrett of the University of Nevada—Reno; Dean Linsenmeyer of the University of Nebraska—Lincoln; Lester Mandersheid of Michigan State University; Carl Pherson and John Shields of California State University—Fresno; Lawrence Bohl of Purdue University; Robert Emerson of the University of Florida—Gainesville; Ronald Deiter of Iowa State University; Josef M. Broder of the University of Georgia—Athens; Alvin Schupp at Louisiana State University; Roger D. Herriman at Illinois Central College; John Rogalla at California Polytechnic State University; and James Shataua at University of Wisconsin—River Falls.

A special note of appreciation also is due Dr. Ken Young for his skill in editing and updating the manuscript for this edition. Finally, although we appreciate all the excellent advice and counsel of others, errors and omissions that remain are the sole responsibility of the authors.

GAIL L. CRAMER
CLARENCE W. JENSEN
DOUGLAS D. SOUTHGATE



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