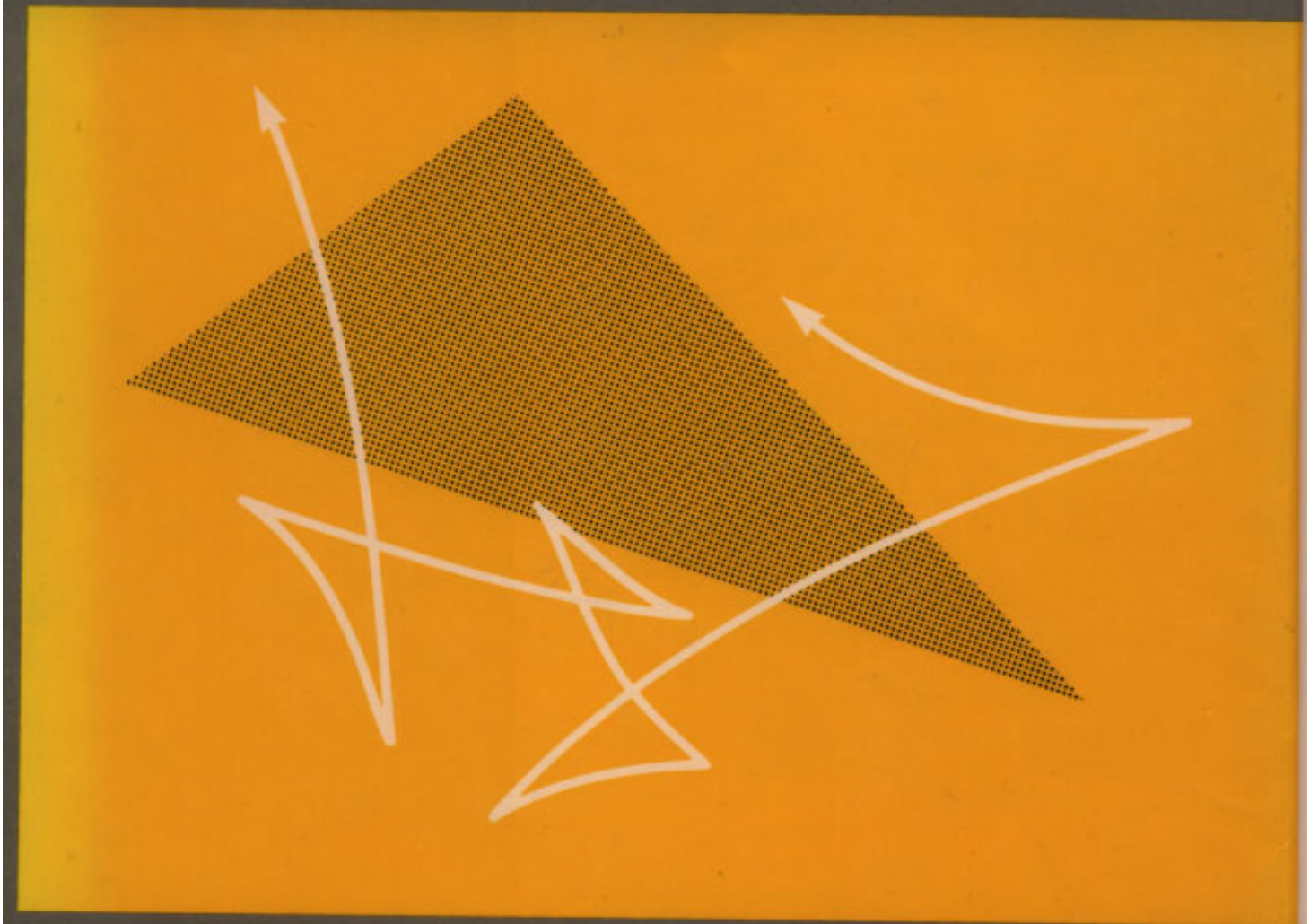
MATHEMATICAL PROGRAMMING FOR ECONOMIC ANALYSIS IN AGRICULTURE



Peter B. R. Hazell
Roger D. Norton

In recent years, mathematical programming has become an important and widely used tool for economic analysis in agriculture. Its use has been facilitated by major advances in computing technology and in methods of incorporating observed institutional and economic reality into programming models. As Hazell and Norton show, such models can offer unique advantages over other methods of agricultural sector analysis. Mathematical programming models can address the multivariant and highly interlinked nature of the agricultural sector. Further, they can bring detailed micro-level data bases to bear in the analysis of such policy issues as pricing, employment, investment decisions, comparative advantage, and risk analysis.

This book is the first to describe fully the theory and application procedures needed for building programming models in agriculture. The authors show how many different hypotheses about economic behavior can be incorporated into programming models and how these models can be applied to many diverse questions of agricultural policy. Covering the field completely, including farm-level and sector-level analysis, this book contains chapters written for readers both interested in practical applications and those interested in theoretical underpinnings.

The book features a practical introduction to the theory and practice of mathematical programming and leads the reader through procedures for solving linear models. Model applications to policy analysis are illustrated with numerous real-world studies, with particular emphasis on policy analysis in developing countries.

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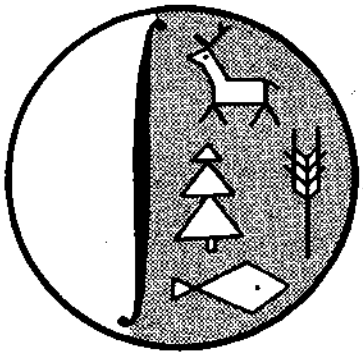

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MATHEMATICAL PROGRAMMING FOR ECONOMIC ANALYSIS IN AGRICULTURE

PETER B. R. HAZELL

International Food Policy Research Institute

ROGER D. NORTON

University of New Mexico
Oklahoma State University

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