



Wheat: Chemistry and Utilization

By Hugh Cornell, Albert W. Hoveling

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This new book meets the need for a comprehensive, up-to-date review of wheat chemistry, processing and uses. It provides the reader with extensive new information on wheat components that will be useful in better commercial utilization of wheat and the formulation of new and upgraded wheat-based food products. The book serves as a one-volume information resource for all those involved in the research, development, formulation, and evaluation of wheat-based food products.

From the Authors' Preface

Wheat continues to be one of the world's most important grains, especially as a food, where the unique properties of its products can be utilized to advantage. It provides an excellent example of a natural product from which a wide range of useful by-products can be made. This book discusses the components of the wheat kernel, which provide interesting examples of study of carbohydrate and protein chemistry, as well as lipids, minerals and vitamins.

This book should serve as a useful reference for the cereal chemist, as well as chemists and food technologists in those industries in which by-products of flour are used, e.g., the confectionery industry in which modified starches and starch syrups are used. In addition, nutritionists, dieticians, and many kinds of researchers will find chapters of interest. Particular attention is given to particle-size determinations, an important area in food processing, and to the role of wheat proteins in gluten intolerance and wheat allergy. . . . Both the milling of wheat and flour quality are discussed in order to give the reader an idea of the distribution of the major components and the importance of proper size reduction. The book also has a chapter on wet milling of wheat flour . . . and chapters on the properties and uses of wheat starch, starch syrups, and chemically modified wheat starch.

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The Authors

Dr. Cornell received his M.Sc. from the University of Melbourne and his Ph.D. from the Royal Children's Hospital, Melbourne. His faculty positions have included those of Senior Lecturer and Associate Professor in the Department of Applied Chemistry at the Royal Melbourne Institute of Technology, and Visiting Professor at the University of Zurich, Karolinska Institute (Sweden) and the Technical University, Munich. More than forty of his papers have been published in journals, and he has made more than forty invited conference presentations.

Dr. Hoveling received his Ph.D. from Flinders University of South Australia. He has been on the faculty of the Royal Melbourne Institute of Technology, in the Department of Applied Chemistry, for more than twenty-five years, first as a Lecturer and now as Senior Lecturer. Two areas of his specialization are analytical techniques and chemical information systems.

ISBN: 1 -56676 -348 -7 Year: 1998

Number of pages: 426 Dimensions: 6 " x 9" Cover type: hardcover

Price: \$104.95

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Number of pages: 426 Dimensions: 6 " x 9" Cover type: hardcover

Price: \$104.95

Wheat: Chemistry and Utilization By Hugh Cornell, Albert W. Hoveling Bibliography

- Sales Rank: #5419045 in Books
- Published on: 1998-01-05
- Original language: English
- Number of items: 1
- Dimensions: 9.50" h x 6.50" w x 1.50" l, 1.80 pounds
- Binding: Hardcover
- 426 pages

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