PETFOOD TECHNOLOGY

First Edition

PETFOOD TECHNOLOGY

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Timothy D. Phillips, DVM

With over 70 contributors selected for their recognized leadership in the field.

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Foreword

FROM THE EDITORS OF PETFOOD TECHNOLOGY

Putting together a textbook sounds easier than it actually is. When this project was first discussed in the late fall of 2001, I was sure it could be done within the space of a year. I was wrong. When working with more than 70 industry leaders and their busy schedules, time has a way of getting away from you. Now I realize that compiling a quality product takes much more time than a mere twelve months.

Since there has never before been a comprehensive text written on petfood production, we at WATT Publishing Co. chose to take up the task. We started by compiling a tentative outline for the text. We decided on ten sections (including introduction and appendices) covering:

- · Companion animal nutrition;
- · Plant management;
- · Palatability;
- · Plant design and engineering;
- · Ingredients and formulation;
- · Equipment and processing;
- · Packaging; and
- · Quality.

The next step in this process was to develop outlines for each section and recruit a known leader in each field. Their job description entailed critiquing and reviewing the content and accuracy of each chapter in their respective section. It was difficult to find just the right people for this job, but I am very happy with the selections we made. Each "Section Leader" was first given the task of reviewing our tentative outline and making suggestions as to their section's content. After finalizing these outlines, it was time to assign authors to each chapter.

Again, we went looking for leaders in the industry and were able to convince some excellent folks to join the project. With numbers totaling around 70 authors, it has been a daunting task to keep everyone informed and reminded along the way. We

wanted to include chapters that would convey information useful to everyone—from novice to seasoned expert.

This project has been challenging and even frustrating at times, but I am very proud of the work that has been done. My hope is that *Petfood Technology* will serve as a valuable reference to those involved in the petfood industry for many years to come. I would also like to thank each and every one of the contributors to this text for taking the time and providing their knowledge to the world.

Finally, this book would not exist without the efforts of our staff. From proofreading every page in this book (twice), to redoing the page layouts many, many times, they have been crucial to this project. Thank you Larry, Theresa, Connie, Luke, Cindy and Chris for being so patient with me throughout the entire process.

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Being involved in the publishing of this textbook has been a good and challenging experience. It has been a labor of love and pain, for us, as well as for our section leaders and authors. They have done a great job. I think the result is a positive contribution to the petfood industry.

We hope that *Petfood Technology* will be a valuable resource to you. Any ideas for future editions are welcome. Please let us know by E-mailing phillips@wattmm.com

Tim Phillips, om

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SECTION LEADER INFORMATION



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Section VI. PLANT MANAGEMENT

Barbara Wry, MBA

Ms. Wry has 20 years of experience in manufacturing. She earned her BS from the University of Wisconsin (Oshkosh) in 1976 and her MBA in 1991 from the University of Wisconsin (Madison). She started her career with Schreiber Foods, Inc. where she was responsible for product development, marketing and sales. From 1994-1996,

she worked with an independent manufacturing consultancy with emphasis on process improvement and operational planning and implementation. Currently, she is plant manager for Safeway, Inc. This Emporia, Kansas, USA dry petfood facility produces a variety of products for Safeway, as well as other public customers. Contact information: 841 Graphic Arts Road, Emporia, Kansas 66801 USA, Tel: +1.620.342.1650, Fax: +1.620.342.6786, E-mail: barbara.wry@safeway.com



Section VII. EQUIPMENT AND PROCESSING

Jeff Herbster

Mr. Herbster is president of J. Herbster Inc., a consulting firm associated with the processed food and feed industries, with emphasis on extrusion cooking. Some of the services provided include product development assistance, equipment purchasing representation, equipment installation guidance, operator training and operational procedure

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David Edley, BSc, PhD

Dr. Edley worked for Pedigree Petfoods (a division of Mars Inc.), located in Melton Mowbray, UK, for 21 years. For the majority of his time he was involved with Process and Equipment Development in both R&D and Manufacturing environments. His areas of expertise include meat processing, powder handling, filling technology, aseptic technology and processing effects on palatability. Dr. Edley has a BSc in Chemical Technology and a PhD in Organic Chemistry. He is now retired and lives in Oakham, UK. Contact information: Tel: +44.1572.755.879,

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Section VIII. PACKAGING

Harold Hughes, MS, PhD

Dr. Hughes is currently professor of Packaging at Michigan State University in Lansing, Michigan. He received a BS and PhD from Michigan State University and a MS from the University of Arizona. His degrees were in Agricultural Engineering and Systems Science. His professional positions have been in academia, including five

years at the University of Guelph in Ontario, Canada and 13 years at Virginia Tech. He returned to Michigan State University in 1986 as director of the School of Packaging. In 1992, he moved to a teaching and research position emphasizing packaging machinery and computer applications. Contact information: 157 Packaging Bldg., MSU, E. Lansing, Michigan 48824 USA, Tel: +1.517.353.6462, E-mail: harold@msu.edu



Section IX. QUALITY

David Rosenblatt, BSc, DVM

Dr. Rosenblatt was the manager of Safety, Health, Environment and QA for Unilever Bestfoods Israel from 1996-2002. He joined Unilever in 1993 as R&D manager for petfood. Dr. Rosenblatt currently heads the food department at The Standards Institution of Israel. He is also a lecturer on companion animal nutrition at the Hebrew University's

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