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A Note from the Co-Director

The food industry is a large and diverse system with a set of companies stretching from small farm producers and roadside stands around the world to mega retail food stores and multinational foodservice chains. In the United States alone, the food and agricultural sector comprises 12 percent of the Gross Domestic Product, 17 percent of the employment, and four percent of imported goods. Retail sales revenue is divided almost equally between retail food stores and foodservice places. Together these two retail distribution channels sell over 1.4 trillion dollars of food and beverage a year. Complicated supply chains characterize this industry as it gathers food and food ingredients from around the world and assembles them into edible products under brand names like McDonald’s, General Mills, Kellogg’s or Whole Foods. The complexity of the modern food system is illustrated by a list of 75 ingredients and additives that go into making a standard cheeseburger.¹

With the possible exception of medicine, no product so intimately interacts with the social environment, health and well-being, and emotions of its consumers. The industry is constantly under scrutiny from the media, government regulators and final consumers. Consequently, this industry faces several mega issues (obesity, safety and defense, environmental sustainability, etc.) that no one company can or will be able to solve alone. Solutions cut across all parts of the supply chain and involve all parts of a company. As the global and industrial food system is coming under increased scrutiny, consumers’ quest for “authentic” or “natural” food increases opportunities for smaller local enterprises even while consolidation is creating ever larger firms. One of the biggest challenges for food companies is to compete for consumers with very diverse tastes and budgets. Providing a forum where people from industry, government and academia can dialogue about these global issues is one of the valuable services our Center provides.

The Food Industry Center’s Fall Symposium Series provides a venue for this dialogue to take place. The Fall 2006 Symposium presented a forum on issues around food defense in collaboration with the National Center for Food Protection and Defense and Georgia Institute of Technology. Food defense is distinguished from food safety in that it involves preparedness and resiliency against the deliberate contamination of food with terrorist intent, a relatively new issue of international interest with health, financial and economic implications. Following up the symposium on food defense, the Fall 2007 Symposium focused on “The Future and Practice of Healthy Foods” including discussions on sustainability and the meaning of being “green.”

The Food Industry Center, with a small but talented staff, must select which issues it will address. This Sloan Foundation Industry Studies Center has selected three major issues around which to focus its research and activities: Food Safety and Defense, Healthy Foods for Healthy Lives and Healthy Business, and Education for the Next Generation Industry Leaders. The following pages review our activities in these areas for the academic year of 2006-2007. We welcome your interest, comments, suggestions and support.

Jean Kinsey, Co-Director

¹ (Compiled by Shaun Kennedy of the National Center for Food Protection and Defense, University of Minnesota)
Introduction

The Food Industry Center (TFIC) was founded in January 1995 at the University of Minnesota as one of several Alfred P. Sloan Foundation Industry Studies Centers and the only one that studies the food industry. TFIC has an illustrious twelve year history of conducting primary research on the food industry and offering forums on current industry topics and best practices. Originally established as The Retail Food Industry Center, the Center changed its name to The Food Industry Center in 2001 to accurately portray the breadth of food industry studies the Center conducts.

TFIC is a national collaboration of scholars made up of faculty, students, and industry leaders from across the nation and the world who address the issues of an efficient, ethical, healthy, and safe food system. The Center addresses cross-sector issues through developing and disseminating data and analysis focused on how food moves from farm to fork.

The Center is advised by three boards – a Board of Executives that provides senior level strategic guidance, the Program Leadership Board whose members contribute their practical experience to our research and programs, and an Academic Leadership Board made up of faculty from the College of Food, Agricultural and Natural Resource Sciences and the Carlson School of Management.

OUR MISSION

The Food Industry Center will develop leaders for tomorrow’s food industry. Through research, educational programs, and industry collaboration, it is a leading source of knowledge on how food reaches consumers efficiently and contributes to safe and healthy lives.
Events & Outreach

As part of its mission, The Food Industry Center hosts public education and outreach events that encourage collaborative discussions and learning between private industry and the public sector on efficient, ethical, healthy, and safe food systems. This year, TFIC hosted three events that brought together professionals, faculty, and students from across the world to discuss current issues in the food industry.

Symposium: Preparedness, Response, and Recovery

Food protection and defense is a key strategic initiative for The Food Industry Center. Leveraging its position as the academic thought leader for the food industry, TFIC co-hosted, with the National Center for Food Protection and Defense and the Georgia Institute of Technology, the Terrorism, Pandemics, and Natural Disasters: Preparedness, Response, and Recovery Symposium on November 1, 2006. Held on the University of Minnesota campus, the Symposium brought together over 120 key stakeholders from the industry, government, academic, and nonprofit sectors.

The Preparedness, Response, & Recovery symposium drew upon the leadership of Jeff Noddle, Chair and CEO of SUPERVALU, Inc., who gave the keynote address and emphasized these key points, among others: 1) expect the unexpected, 2) integrate disaster recovery programs across the entire food supply chain, and 3) take action now!

Guest presenters from Kellogg Company, Kraft Foods Global, and Restaurant Services, Inc. contributed their front-line industry insight. In addition, Professors from The Wharton School, Michigan State University, Georgia Institute of Technology and the University of Minnesota presented current academic research and analysis on food industry preparedness. Experts from the National Center for Food Protection and Defense, shared their efforts to integrate food safety preparedness across all sectors and provided participants with an interactive lunch-time “disaster scenario” exercise.

Professor Jean Kinsey, Co-Director of the Center and Professor Hamid Mohtadi, Visiting Co-Director from the University of Wisconsin, Milwaukee, brought together this stellar panel of academic and industry colleagues. The Food Industry Center is uniquely positioned to bring together key industry leaders and faculty experts for a wide-ranging and comprehensive program on food protection and defense, an issue which affects every sector of the food industry, from manufacturing to distribution to retail sales.

TFIC published the Terrorism, Pandemics, and Natural Disasters: Food Supply Chain Preparedness, Response, and Recovery Symposium Summary to capture the day’s presentations and conversations. A copy of the summary can be found on the TFIC Website at http://foodindustrycenter.umn.edu/pastevents. Thanks to financial support from the University of Minnesota Extension Service, the symposium was also filmed and is now available from the Center on CDR.
Spring Conference: New Products, New Opportunities

A key message that has been repeated to TFIC from food industry leaders and practitioners is the need to cultivate the next generation of food industry employees. Current university students do not always consider the wide range of jobs and career tracks available in the food industry, and TFIC was challenged by its Program Leadership Board to leverage its position as an Industry Studies Center in a top university to help raise the profile of the food industry among university students.

Our response to this challenge was our first annual Spring Conference for Students and Alumni held in late March 2007. Over 150 students, alumni and industry professionals gathered on the University of Minnesota campus for networking and discussion about “New Products, New Opportunities” in the food industry. Generous corporate sponsorship from CHS, SYSCO, SUPER VALU and Nash Finch provided free registration to any enrolled University of Minnesota student.

Jon Seltzer, a food industry consultant for the Center, helped to coordinate the event which featured presentations by university professors from the three academic disciplines: Brian Buhr from Applied Economics, Allen Levin from Food Science and Nutrition, and George John from the Carlson School of Management. Each of the presenting faculty members were introduced by a student from their respective departments. Refreshments were served between presentations to facilitate networking and human resource professionals from the event sponsors were on hand to discuss career options with students.

Colloquium: Food, Technology, and Individual Privacy

With a generous grant from the University of Minnesota’s Consortium on Law and Values in the Health, Environment, and the Life Sciences, The Food Industry Center wrapped up its 2006-2007 events season with the Food, Technology, and Individual Privacy Colloquium on Radio Frequency Identification (RFID) technology use by the food industry. On May 16th, over 50 participants registered to hear presentations and discussion on the technical, consumer privacy, and legal implications of RFID use in the food industry. A colloquium summary was published in June 2007 and is available on The Food Industry Center’s Website at http://foodindustrycenter.umn.edu/past_events.

TFIC Co-Director and Professor Ben Senauer and Post-Doctoral Research Associate Koel Ghosh assembled an expert panel of faculty and an outside specialist to address the use of radio-frequency identification tags by the food industry and the privacy implications for the consumer. When used at the pallet level, RFID tags provide useful, and potentially life-saving data on food freshness, temperature and time-to-market. But if food items are individually-tagged, the potential exists for wide-scale data gathering on individual consumer behavior.

For food companies, consumer trust is a mission-critical component. By examining the privacy implications of this technology, The Food Industry Center fulfills its mission of providing a fresh, unbiased perspective on future trends in the food industry, adding value by calling attention to matters of which industry insiders may not be aware.
Research

Would you invest $2.7 million dollars in research projects relating to the food industry?

That’s what the National Institutes of Health, the United States Department of Agriculture, and the Department of Homeland Security have chosen to do this past year. The Food Industry Center doubled its sponsored-project research budget by submitting successful grant applications to these agencies and others, receiving funding commitments for the following research projects:

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<th>PROJECT</th>
<th>FUNDING SOURCE</th>
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<td>Retail Supply Chain Benchmarking Survey</td>
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<td>Consumer/Citizen Survey on Food Defense</td>
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<td>Supermarket Characteristics and Operating Costs in Low-Income Areas</td>
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<td>National Institutes of Health</td>
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<td>Preventing Age-Related Weight Gain in Midlife Women</td>
<td>USDA – Cooperative State Research, Education and Extension Service</td>
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<td>The Role of Information Transmission and Coordination in Supply Chain Resiliency</td>
<td>National Center for Food Protection and Defense</td>
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<tr>
<td>Agricultural Conversion Factors Project</td>
<td>USDA – Economic Research Service</td>
<td>$250,000</td>
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Weight Gain and Energy Balance

TFIC Research Fellow Dennis Degeneffe and Professor of Food Science and Nutrition Marla Reicks saw a smaller initial grant from the National Institutes of Health turn into a substantially larger second grant from the USDA to study energy balance and weight gain in mid-life women. In one of the first studies of its kind, the researchers are combining clinical and survey research data as well as the best techniques of both nutrition science and market research to develop a demographic segmentation of the respondents to the survey. This holistic approach to researching weight gain showcases the synergies available in an Industry Studies Center based at a research university.

Industry Diagnostic Tool For Food Defense

Over the past three years, The Food Industry Center has been developing a diagnostic tool that will allow companies to benchmark themselves against the best-in-class (industry leader) when it comes to adopting business and production practices that protect food being received, processed, and delivered from potential terrorist attacks. It will help food firms in each sector of the supply chain (manufacturers, distributors, etc.) establish their strategies and priorities for food defense. The diagnostic tool was developed in collaboration with colleagues at Michigan State University and Georgia Institute of Technology. Both the Retail Benchmark Survey and diagnostic tool are administered by TFIC with advice from various food companies. The diagnostic tool will be available in the fall of 2007 and will help companies gauge industry preparedness against international attacks on the food supply. Visit http://foodindustrycenter.umn.edu/Research.html to access the diagnostic tool.

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<tr>
<td>Food Products:</td>
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<tr>
<td>OVERALL SCORE</td>
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</tbody>
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(Sample)
Supermarket Panel Returns

After a four year hiatus, The Food Industry Center's Supermarket Panel has returned. The mission of the Panel is to provide information about how changes in store performance and customer loyalty are linked to store and department characteristics, product mix, customer service, and the adoption of new technology, management and labor practices. In addition to identifying best business practices, the Panel identifies employer and customer service practices that lead to satisfied and well-served workers and consumers.

This round of the Supermarket Panel's research is led by Clarissa Yeap, Assistant Professor of Applied Economics. Yeap's research experience in industrial organization and food industry marketing make her an ideal collaborating partner on the Center's Supermarket Panel. Jon Seltzer will continue his role as the Panel's project manager. The project was reinstated in 2007 with funding from the Economic Research Service of the USDA.
How Much of the Food We Raise Actually Makes it into the Stores?

To answer this question, **Professor Ben Senauer** and industry consultant **Jon Seltzer** did their own field work, literally. Senauer and Seltzer visited the Salinas Valley of California (the nation’s salad bowl), to learn about the harvesting and packaging procedures of a celery harvest. Their observation found that 95% of celery stalks make it to the retail level whereas only 45% of cut celery pieces become consumer product.

Through a Cooperative Agreement with the Economic Research Service (ERS), TFIC researchers, **Ben Senauer, Jon Seltzer, and Koel Ghosh**, were asked to update the yield factors of specified agricultural products tracked by ERS. These collected yield factors of various food products allow the USDA to calculate the food availability, per person nutrients available at the retail level and the widely used per capita consumption data. These numbers play an important role in policy making for food and agricultural markets, human health, and nutrition.

The Agricultural Conversion Factors project required cross-sector collaborative research that has become a specialty of The Food Industry Center. Industry practitioners and academic observers of the food system were contacted by TFIC researchers over a two-year period to actualize these numbers. TFIC researchers wrapped up their work in December 2006. Results from the Agricultural Conversion Factors Study can be found at http://foodindustrycenter.umn.edu/Agricultural_Conversion_Factors.
The Food Industry Center is frequently contacted by the media as a source of knowledge on the food industry. Here is some of what we had to say…

“When food gets that cheap, you really wonder how much of the ingredients are authentic and how much are some cheaper substitute.”


“The people importing it have to be better at testing what they’re getting, and developing a stronger international protocol for tracking and tracing the food that comes through the supply chain.”


“I was shocked by how burned they felt about the whole thing, how budget-conscious they had to be, how much they disliked buying and preparing food.”

Ben Senauer discussing a poll of price-conscious women shoppers - “You Are What You Eat.” City Pages, Volume 28 - Issue 1370, March 7, 2007

The new restriction may be what’s needed to shore up consumer confidence that the FDA can protect the food supply: Without such action, the public’s distrust will grow.


“Well, we’re just beginning to realize some of the implications of having linked food prices to oil prices. Right now a bushel of corn sells for $3.70. If oil went to $80 a barrel, ethanol producers could pay $5 a bushel for corn.”

Ben Senauer – discussing the link between ethanol and rising food prices. CNN In The Money, June 10, 2007.

“The average Japanese household spends almost a quarter of its income on food compared to under 14% in the US…. Japanese cities are based on efficient public transport and walking. The average American commutes to work, drives to the supermarket and does as little walking as possible.”

Publications

The Food Industry Center engages faculty and graduate students in world-class academic research and consequently publishes a number of journal articles, working papers, and research reports on topics directly related to the food industry. Below is a review of what we have accomplished this year.

Publications by TFIC Directors, Staff, and Affiliates


Publications about The Food Industry Center


TFIC Working Papers


TFIC publications can be found on our Website at: http://foodindustrycenter.umn.edu/Publications.html
Acknowledgements

The Food Industry Center would like to acknowledge and extend a special thank you to all the people who contributed their knowledge, support, and time to our programs and research this past year.

Diane Bowers, President, Council of American Survey Research Organizations
Brian Buhr, Ph.D. Professor of Applied Economics and E. Fred Koller Chair in Agricultural Management Information Systems, University of Minnesota
Mary Bushette, Director of Alumni Relations, College of Food, Agricultural, and Natural Resource Science, University of Minnesota
Frank Busta, Ph.D., Professor Emeritus of Food Science and Director of the National Center for Food Protection and Defense, University of Minnesota
David Closs, Ph.D., The John H. McConnell Chair in Business Administration Marketing & Supply Chain Management, Michigan State University
Prentiss Cox, J.D., Associate Professor of Clinical Law, University of Minnesota
Alan Erera, Ph.D, Associate Professor, H. Milton Stewart School of Industrial and Systems Engineering, Georgia Institute of Technology
Adam Fischer, Associate Development Officer, College of Food, Agricultural, and Natural Resource Sciences, University of Minnesota
Col. John T. Hoffman, USAR, Ret., Senior Research Scholar, National Center for Food Protection and Defense, University of Minnesota
George Hoffman, President & Chief Executive Officer, Restaurant Services, Inc.
William Hueston, Ph.D., Professor of Veterinary Population Medicine, Adjunct Professor in the School of Public Health, and Director for the Center for Animal Health and Food Safety, University of Minnesota
George John, Ph.D., Professor and Pillsbury-Gerot Chair in Marketing, Carlson School of Management, University of Minnesota
Shaun Kennedy, Deputy Director of the National Center for Food Protection and Defense and Associate Director of the Center for Animal Health and Food Safety, University of Minnesota
Rob King, Ph.D., Professor and Department Head of Applied Economics, University of Minnesota
Ted Labuza, Ph.D., Morse Alumni Distinguished Teaching Professor of Food Science, University of Minnesota
Allen Levine, Ph.D. Dean of the College of Food, Agricultural, and Natural Resource Sciences and Professor of Food Science and Nutrition, University of Minnesota
Mike Martin, Ph.D., President, New Mexico State University
Larry McCurry, Development Consultant, The Food Industry Center, University of Minnesota
Hamid Mohtadi, Ph.D., Professor of Economics, University of Wisconsin-Milwaukee and Visiting Co-Director, The Food Industry Center, University of Minnesota
William McGeveran, J.D., Associate Professor, University of Minnesota Law School
Erwann O. Michel-Kerjan, Ph.D., Managing Director, Risk Management and Decision Processes Center & OPIM Department, The Wharton School, University of Pennsylvania
Steve Olson, Executive Director, Minnesota Turkey Growers Association
Todd Powell, Agricultural Safety and Health Program, University of Minnesota Extension Service
Fred Riggins, Ph.D., Assistant Professor of Information and Decision Sciences, Carlson School of Management, University of Minnesota
John Shutiske, Professor of Bioproducts and Biosystems Engineering and Extension Agricultural Safety and Health Specialist, University of Minnesota
Tom Stinson, Ph.D. Associate Professor of Applied Economics, University of Minnesota and Minnesota State Economist
Joel Vander Kooi, Assistant Treasurer, Risk Management, Kellogg Company
Dave Wankowski, Regulatory Affairs Manager, Kraft Foods Global, Inc.

Tom Whelan, Executive Vice President & Chief Operating Officer, Nemer Fieger University of Minnesota Consortium on Law and Values in the Health, Environment, and the Life Sciences
University of Minnesota Extension Service
Kevin Webster, Market Research Lead, Target
Chelsea White, Ph.D., H. Milton and Carolyn J. Stewart Chair Schneider National Chair in Transportation and Logistics, Georgia Institute of Technology

STUDENTS

Swati Agiwal, Ph.D. Student in Applied Economics, University of Minnesota
Rachael Dettmann, Masters Student in Applied Economics, University of Minnesota
Kari Heerman, Ph.D. Student in Applied Economics, University of Minnesota
Kathryn Johnston, Masters Student in Applied Economics, University of Minnesota
Kateryna Kayntz, Masters Student in Applied Economics, University of Minnesota
Naichia Li, Ph.D. Student in Applied Economics, University of Minnesota
Ryan Lynch, Bachelor of Science Student in Applied Economics, University of Minnesota
Alex Pennell, Masters Student in Applied Economics, University of Minnesota
Dan Peterson, Bachelor of Science Student in Applied Economics, University of Minnesota
Kevin Rice, Bachelor of Science Student at the Carlson School of Management, University of Minnesota
Natalia Schroeder, Graduate Student in Nutrition Science, University of Minnesota
Uttaf Sharma, Ph.D. Student in Applied Economics, University of Minnesota
Ben Stevens, Bachelor of Science Student at the Carlson School of Management, University of Minnesota
Minh Wendt, Ph.D. Student in Applied Economics, University of Minnesota
The Food Industry Center would like to extend a special **THANK YOU** to [John Johnson](#) and [Rick Schnieders](#) for their leadership of our Board of Executives all of whom graciously extended their guidance to the Center this year.

Steve Aanenson, President, Old Dutch Foods
Hamed Faridi, Vice President for Research & Development, McCormick & Co., Inc.
John Johnson, President & CEO, CHS, Inc.
Jeff Noddle, Chairman & CEO, SUPERVALU
Jeffrey Poore, Executive Vice President, Supply Chain Management, Nash Finch Company
Richard Schnieders, Chairman, President, and CEO, SYSCO Corp.
Jeff Sholl, President, The Scholl Group / Green Giant Fresh
Mark Spliethoff, Vice President, Distributor Trade Development, Kellogg’s Food Away From Home
Mark Wilhite, Vice President of Industry Initiatives and National Retail, General Mills
Tom Zaucha, President & CEO, National Grocers Association

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National Grocers Association
Old Dutch Foods
Rich Products
Sturm Foods
SUPERVALU, Inc.
SYSCO Corporation

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**PROGRAM LEADERSHIP BOARD**

TFIC would also like to extend a sincere **THANK YOU** to members of our Program Leadership Board. Members contribute their practical knowledge of the food industry to our research and events and provide valued guidance to our work.

Joseph Scimeca, Ph.D., Director of Regulatory Affairs, Cargill, Inc.
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Helen Clark, Director of Marketing, Health and Wellness, ConAgra Lamb Weston
Debbie Garcia, Ph.D., Health and Wellness Center of Excellence, General Mills, Inc.
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Randy Rutzick, Director, Customer Marketing & Category Management, Land O’Lakes
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Brian Numainville, Sr. Director, Research & Public Relations, Chair, NFC Foundation, Nash Finch Company
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Cindy Scott, Food Technologist & Q.A. Supervisor, Old Dutch Foods
Carol Martinson, Vice President, Asset Protection, SUPERVALU, Inc.
Lynn Olsen, Vice President, Retail Business Change, SUPERVALU, Inc.
Tim Peterzen, Senior Vice President, SYSCO Minnesota
THE FOOD INDUSTRY CENTER STAFF

Jean Kinsey, Professor of Applied Economics and Co-Director
Ben Senauer, Professor of Applied Economics and Co-Director
Dennis Degeneffe, Research Fellow
Koel Ghosh, Research Associate
Lisa Jore, Executive Administrator
Larry McCurry, Development Consultant
Hamid Mohtadi, Professor of Economics, University of Wisconsin-Milwaukee and Visiting Co-Director
Rand Park, Development Officer
Jon Seltzer, Industry Consultant

Back row (left to right): Jon Seltzer, Ben Senauer, Rand Park, and Dennis Degeneffe. Front row (left to right): Koel Ghosh, Jean Kinsey, and Lisa Jore. Larry McCurry and Hamid Mohtadi not shown.