

**DIANA TWEDE, Ph.D.**

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**CURRICULUM VITAE**

**Education:**

Ph.D. 1988	Michigan State University in Business: Logistics, Marketing, and Packaging.
M.A. 1977	Michigan State University in English.
B.A. 1975	Utah State University in English and Library Science.

**Professional Experience:**

2007-present	Professor, Michigan State University School of Packaging
1997-present	Adjunct Appointment, Professor MSU Department of Supply Chain Management
1977-2007	Research Assistant, Assistant Professor, Associate Professor MSU School of Packaging

My research area is in the economics and performance of packages in production, marketing, and logistical systems.

My current research investigations include:

- The history of shipping containers.
- The economic and operational effect of reusable shipping containers and pallets.
- The economics of printing on corrugated board.

I regularly teach our undergraduate senior capstone course, *Packaging Development*. I also teach *Packaging with Paper and Paperboard*, for which I have published a textbook, and *Packaging Economics*, for which I am currently writing a textbook. I have led overseas study courses in the UK, Spain, Japan and Sweden.

My adjunct position with the Department of Supply Chain Management serves as a bridge between our departments and colleges, and consists of advising Packaging students about Business courses, providing lectures to MSC courses and executive programs on the subject of packaging, contributing to textbook chapters and collaborating with MSC faculty on research projects related to logistical packaging.

I work with the United States Department of Agriculture's Farm Service Agency to test the adequacy of packages for food aid. For over 30 years MSU has provided technical assistance and developed package performance standards for all of the food which the USDA purchases and distributes--the largest food distribution system in the world--which includes such programs as price support commodity purchases, foreign food aid such as "Food-for-Peace" programs, and domestic feeding programs such as school lunches, charities, and disaster assistance.

Other research includes investigations of the causes and prevention of in-transit damage, and the performance of shipping containers.

Through the School of Packaging, for 10 years I offered an annual executive seminar on logistical, financial and technical aspects of reusable shipping containers.

I have served as an expert witness for personal injury, transit damage litigation and patent issues involving packaging. My private consulting experience over the past twenty years has been concerned with the social and economic implications of packaging systems, ranging from distribution system analysis and package design, to evaluation of specific packaging and vehicle loading operations.

Since 2004, I have served as editor, with David Shires, of *Packaging Technology and Science*, the top refereed journal in the packaging field.

### **Professional Awards & Honors:**

\*Military Packaging Hall of Fame, inducted in 2006.

\*2000-2002 President of the National Institute of Packaging, Handling and Logistics Engineers; NIPHLE is the professional organization of those responsible for packaging in government uses (DOD, USDA, GSA).

\*Honor Society of Phi Kappa Phi, 1999.

\*Lilly Teaching Fellow, 1996-97.

\*American Marketing Association Doctoral Consortium Fellow, 1987.

\*Council of Logistics Management Doctoral Dissertation Grant, 1986.

\*NIPHLE 1986 Annual Award of Achievement in the field of Packaging.

\*Pi Kappa Gamma, honorary packaging fraternity, 1988.

\*Beta Gamma Sigma Honor Society, 1988.

## **Professional Affiliations:**

- \*National Institute of Packaging, Handling and Logistics Engineers
- \*Council of Supply Chain Management Professionals (formerly CLM)
- \*Institute for Supply Chain Management
- \*Association for Historical Research in Marketing
- \*Institute of Packaging Professionals, Transport Packaging Committee
- \*National Association of Purchasing Management
- \*Transportation Consumer Protection Council

## **PUBLICATIONS**

### **Books, Chapters, Encyclopedia Articles and Monographs:**

Twede, Diana and Bruce Harte. 2011. Logistical Packaging for Food Marketing Systems. In *Food and Beverage Packaging Technology*, 2<sup>nd</sup> edition, ed. Richard Coles Oxford: Blackwell Publishing/CRC Press.

Twede, Diana and Ron Goddard. 2009. *Materiais para Embalagens - Coleção Quattor - Vol. 3*. Sao Paulo: Edgard Blucher. Portugese translation of *Packaging Materials*, 1998.

Twede, Diana. 2009. "Bags, Bulk, Flexible Intermediate Bulk Containers" *Wiley Encyclopedia of Packaging Technology*, 3<sup>rd</sup>, edition, ed. Kit Yam. New York: Wiley Interscience, pp. 84-87.

Twede, Diana. 2009. "Logistical/Distribution Packaging," *Wiley Encyclopedia of Packaging Technology*, 3<sup>rd</sup> edition, ed. Kit Yam, New York: Wiley Interscience, pp. 677-684.

Twede, Diana. 2009 "Packaging Economics," *Wiley Encyclopedia of Packaging Technology*, 3<sup>rd</sup> edition, ed. Kit Yam. New York: Wiley Interscience, pp. 383-389.

Twede, Diana. 2008. "The History of Packaging," *Dictionary of American History Dynamic Reference*, ed Gary Cross, Robert Maddox & William Pencak. Charles Scribner's Sons/Gale, in press. (In the Dynamic Reference, new articles and revisions of older articles are issued regularly in electronic format, to be collected later in print.)

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Twede, Diana and Susan E. M. Selke. 2005. Cartons, Crates and Corrugated Board: Handbook of Paper and Wood Packaging Technology. Lancaster, PA: DesTech Publications.

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Twede, Diana. 1997. "Logistical/Distribution Packaging," Wiley Encyclopedia of Packaging Technology, 2<sup>nd</sup> edition, ed. Aaron L. Brody and Kenneth S. Marsh, New York: Wiley, pp 572-579.

Twede, Diana and T. Downes. 1997. "Packaging Economics," Wiley Encyclopedia of Packaging Technology, 2<sup>nd</sup> edition, ed. Aaron L. Brody and Kenneth S. Marsh, New York: Wiley, pp 325-331.

Twede, Diana. 1995. "Responsibility for Distribution Packaging," reprinted in Distribution Packaging Technology, ed. Robert M. Fiedler, Herndon, VA.: Institute of Packaging Professionals, pp 223-234.

Goff, James W. and Diana Twede. 1995. "Distribution Damage Measurement, Analysis and Correction," reprinted in Distribution Packaging Technology, ed. Robert M. Fiedler, Herndon, VA.: Institute of Packaging Professionals, pp 253-260.

Twede, Diana and Caris J. Palmer. 1995. "Logistical Loss and Damage: Who Pays?" reprinted in Distribution Packaging Technology, ed. Robert M. Fiedler, Herndon, VA.: Institute of Packaging Professionals, pp 211-222.

Twede, Diana. 1995. "Less Waste on the Loading Dock: The Reduction of Logistical Packaging Waste as a Competitive Strategy," Working Paper Series of the Yale Program on Solid Waste Policy. New Haven, Connecticut: Yale.

Twede, Diana. 1994. "Packaging" in The Logistics Handbook, ed. James F. Robeson and William C. Copacino, New York: Macmillan.

Twede, Diana. 1994. "Fiber Industry No Longer in Charge of Logistical Packaging," Transportation Packaging and the Environment: Regulation, Trends and Case Histories, Riverdale, MD: Raymond Communications.

Miteff, Steven P. and Diana Twede. 1992. Quality Improvement Initiatives in Foreign Food Aid Shipments: A Report on Improved CSB Shipments to India. MSU School of Packaging Project 1, Special Report No 28.

Twede, Diana, ed. 1991. Logistical Packaging Innovation Symposium Proceedings. Chicago: Council of Logistics Management.

Miteff, Steven P. and Diana Twede. 1990. Open-Ended Bag Problems; An Investigation of Multiwall Paper CSB Bag Closure Failures Reported in India and Recommended Solutions. MSU School of Packaging Project 1 Special Report No 27.

Goff, James W. and Diana Twede. 1988. Distribution Packaging: Packaging for the Distribution of Consumer Products and Industrial Materials. East Lansing, Michigan: Kinkos Professor Publishing.

Twede, Diana. 1988. "The Process of Distribution Packaging Innovation: The Effect of Distribution Channel Structure." Ph.D. dissertation, Michigan State University.

Goff, James W., Diana Twede, Emily Li, et. al. 1985. A Bunch of Bag Tests. East Lansing, Michigan: School of Packaging Special Report Number 18.

Goff, James W. and Diana Twede. 1982. Shake and Break (Laboratory Adventures in Package Dynamics). Portland, Michigan: By the author, 933 James Street.

Goff, James W. and Diana Twede. 1980. Now Performing: 50-lb Bags; Final Report and Performance Standard for Grain Product Packages. East Lansing, Michigan: MSU School of Packaging Special Report Number 16.

Goff, James W. and Diana Twede. 1979. Boxes, Bags, and Cans; Performance of Packages for the Transportation of Agricultural Products. East Lansing, Michigan: MSU School of Packaging Special Report Number 14.

### **Refereed Journal Articles:**

Diana Twede. 2012. The Birth of Modern Packaging. *Journal of Historical Research in Marketing*, accepted for publication in vol 4, no 2.

Ross, Anthony, Diana Twede, Robb Clarke, Michelle Ryan. 2009. A Framework for Developing Implementation Strategies for a Radio Frequency Identification System in a Distribution Center Environment. *Journal of Business Logistics*, vol 30, no 1, pp 157-183.

Guzman-Siller, Cristina, Diana Twede and Diane Mollenkopf. 2007. "A Market Driven Investigation of Pallet Trends in Grocery Chains," *Journal of Food Distribution Research*, vol 38, no 1, pp. 161-169.

Gonzalez, Maria Paz, Suzanne Thornsby and Diana Twede. 2007. "Packaging as a Tool for Product Development: Communicating Value to Consumers," *Journal of Food Distribution Research*, vol 38, no 1, pp. 61-66

Clarke, Robert H., Diana Twede, Kenneth Boyer and Jeffrey R. Tazelaar. 2006. "Radio Frequency Identification (RFID) Performance: The Effect of Tag Orientation and Package Contents," Packaging Technology and Science, vol 19, no 1, pp 45-54.

Clarke, Robert H., Diana Twede, Kenneth Boyer and Jeffrey R. Tazelaar. 2006. "Four Steps to Making RFID Work for You," Harvard Business Review Supply Chain Strategy, vol 2, no 2, pp 9-10.

Mollenkopf, Diane, David Closs, Diana Twede, Sangjin and Gary Burgess. 2005. "Assessing the Viability of Reusable Packaging: A Relative Cost Approach," *Journal of Business Logistics*, vol 26, no 1, pp 169-198.

Twede, Diana. 2005 . "The Cask Age: The Technology and History of Wooden Barrels," Packaging Technology and Science, vol 18, no 5, pp 253-264.

Twede, Diana and Robb Clarke. 2004. "Supply Chain Issues in Reusable Packaging," Journal of Marketing Channels, vol 12, no 1, pp 7-26.

Twede, Diana. 2002. "Commercial Amphoras: The Earliest Consumer Packages?" Journal of Macromarketing, vol 22, no 1, June, pp 98-108.

Twede, Diana. 2002. "The Packaging Technology and Science of Ancient Transport Amphoras," Journal of Packaging Technology and Science, vol 15, no 4, pp 181-195.

Twede, Diana. 2002. "Review of The Gift in Sixteenth Century France" (by Natalie Zemon Davis), Journal of Macromarketing, vol 22, no 1, June, pp142-144.

Twede, Diana, Robb Clarke and Jill Tait. 2000. "Packaging Postponement: A Global Packaging Strategy, Packaging Technology and Science, vol 13, no 3, pp 105-115.

Twede, Diana, Robb Clarke and Jill Tait. 2000. "Perspective on a Global Packaging Strategy - Packaging Postponement," Journal for Packaging Professionals, vol 1, no 1, pp 15-18.

Twede, Diana. 1997. "Less Waste on the Loading Dock," Resource Recycling, May, pp 68-70.

Kim, Jonkyoung, Diana Twede and Joel Lichty. 1997. "Consumer Attitudes about Open Dating Techniques for Packaged Foods and Over-the-Counter Drugs," Journal of Food Products Marketing, vol 4, no1, pp 17-29.

Twede, Diana. 1997. "Uneeda Biscuit: The First Consumer Package?" Journal of Macromarketing, Fall, pp 82-87.

Rosenau, Wendee V., Diana Twede, Michael A. Mazzeo and S. Paul Singh. 1996. "Returnable/ Reusable Logistical Packaging: A Capital Budgeting Framework," Journal of Business Logistics, vol 27, no 2.

Twede, Diana. 1996. "Current Issues...Regarding Returnables," Packaging Technology and Engineering, May, pp 1-m.

Lockhart, Hugh E. and Diana Twede. 1995. "For Prescription Drugs, Blisters are Cost-Competitive with Bulk Bottles," Packaging Technology and Engineering, April, pp 38-44.

Li, Fanfu, Diana Twede and James W. Goff. 1993. "Method for Deriving the Correlation Between Free Fall and Shock Machine Drop Height," Packaging Technology and Science, vol 6, no 3, pp 139-146.

Boonyasarn, Antika, Bruce R. Harte, Diana Twede and Julian Lee. 1992. "The Effect of Cyclic Environments on the Compression Strength of Boxes Made from High-Performance (Fiber-efficient) Corrugated Fiberboard. TAPPI Journal, vol 75, no 10, pp 79-85.

Twede, Diana. 1992. "The Process of Logistical Packaging Innovation," Journal of Business Logistics, v. 13, n. 1, pp 69-94.

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Twede, Diana, Omar Keith Helferich and Steve Young. 1991. "Comment--A Note on Expert Systems: Packaging Expertise on a Disk," Packaging Technology and Science, vol 4, pp 293-297.

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Twede, Diana and James W. Goff. 1990. "Mensuracion, Analisis y Correccion de Danos de Distribucion," Logistica Internacional, Monterrey, Mexico, Agosto.

Twede, Diana, Bruce Harte, James W. Goff, and Steven P. Miteff. 1990. "Breaking Bags; A Performance Specification Philosophy Based on Damage." Journal of Packaging Technology, vol 4, no 6, pp 17-21.

Goff, James W., Diana Twede, and Joe Grebe. 1988. "An Examination of the Response of Lading to Transient Excitation by Three Truck Suspension Systems," Journal of Packaging Technology, vol 12, no 2, pp 70-76.

Twede, Diana. 1985. "Responsibility for Distribution Packaging." SPHE Technical Journal, 4, Spring: pp 2-7. Reprinted in Distribution Packaging Technology, ed. Robert M. Fiedler, Herndon, VA: Institute of Packaging Professionals, 1995, pp 223-234.

Goff, James W. and Diana Twede. 1984. "Box Car Test: Influence and Response of Can Shipping Containers to the Rail Mode of Transportation," SPHE Technical Journal, vol 3, no 1 pp 2-8.

Gordon, James B., and Diana Twede. 1980. "Cushioning Materials: Analyzing Vibration Transmissibility," Packaging Technology, vol 10, no 6, pp 19-22.

### **Non-refereed Articles:**

Twede, Diana. 2006. "Obituary: James W. Goff, PhD., Pioneer of Packaging Education, 1920-2006," Packaging Technology and Science, vol 19, no 2, pp 119-120.

Twede, Diana and Susan Selke. 2005. "Opportunity Knocks: What will the Future Hold for Packaging Professionals? You and Today's Packagers in Training will Decide," Official Board Markets, April 9, pp 29-30.

Twede, Diana. 2003. "Logistics Issues in Returnable Packaging," *Transport Packaging*, March, pp 9-11.

Twede, Diana. 2003. "The Packaging Science and Technology of Ancient Transport Amphoras," Reprinted in *Packaging India*, vol 36, no 3, pp 9-19.



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Twede, Diana. 1999. "Can You Justify Returnables?" Transportation and Distribution, April, pp 85-93, reprinted in Packaging India, November 1999, pp 57-59.

Twede, Diana. 1997 "Marketing and Distribution Aspects of Packaging in 2000." Packaging India, vol 30, no. 3, Aug.-Sept. pp 31, 33.

LaMoreaux, Robert D and Diana Twede. 1997. "What is Compliance Labeling?" Returnable Packaging Solutions Summer, pp 6-7.

Twede, Diana. 1997. "Review of The Wiley Encyclopedia Of Packaging Technology," Brand Packaging, Summer.

Twede, Diana. 1996. "Efficient Packaging, Smoother Shipping," Shipping and Receiving, September/October, p.40.

Twede, Diana. 1996. "Issues and Answers in Returnable Packaging," Returnable Packaging Solutions, June, p. 4-5.

Twede, Diana. 1996. "Reduce Waste on the Loading Dock," Shipping and Receiving, May/June, p. 40.

Twede, Diana. 1996. "Packaging and Bagging," Powder and Bulk Engineering, May, p. 140.

Twede, Diana. 1996. "Change Packaging Habits," Shipping and Receiving, March/April, p. 27.

Clarke, Robb and Diana Twede, 1996. "An ABC of FIBCs," Bulk Distributor, February, pp 18-19.

Twede, Diana. 1996. "Let Packaging Fit the Need," Shipping and Receiving, January/February, p. 33.

Twede, Diana. 1995. "Sources of Packaging Information," Shipping and Receiving, September/October.

Twede, Diana. 1995. "What I did on my Summer Vacation: A Review of the Museum of Advertising and Packaging in Gloucester, UK," to be published in Retrospectives in Marketing in Spring.

Twede, Diana and Steven P. Miteff. 1991-92. "USDA's 'Please Recycle' Program" in five parts. PHL Bulletin, October and November/December 1991, January, February and March 1992.

Twede, Diana. 1991. "How Package Planning Reduces Waste," Transportation and Distribution, September.

Twede, Diana. 1991. "Ask the Right Question, Create the Right Package," NPTA Management News, January.

Palmer, Caris and Diana Twede. 1990. "Food Program's Information Appetite Satisfied," Automatic ID News, November.

Twede, Diana, Bob LaMoreaux and S. Paul Singh. 1990. "Packaging: A Quiz for the Automotive Industry," Actionline, September.

Twede, Diana and James W. Goff. 1985. "Are You Packaging or Warehousing?" Warehousing Review, Spring, pp 8-15.

### **Conference Proceedings:**

Twede, D. (Presenter & Author), Conference on Historical Analysis and Research in Marketing, CHARM Association, Leicester, UK, "Cereal Cartons, Tin Cans and Pop Bottles: Package-Converting Technologies that Revolutionized Food and Beverage Marketing, 1879-1902." (May 29, 2009).

Gonzalez, Maria Paz, Suzanne Thornsby and Diana Twede. 2008. "Packaging a New Product: Meeting Inter-Supply Chain Pressures Without Compromising Quality," Food Distribution Research Society Proceedings Issue, vol ?, no ?. (Dublin, OH, October 11-15, 2008)

Gonzalez, Maria Paz, Diana Twede, Bruce Harte, Janice Harte, Suzanne Thornsby and Rafael Auras. 2008. "Stability of Antioxidant Content in Single-Strength Tart Cherry Nutraceutical Juice: A Comparison across Glass , PET and Aluminum Bottles and Flexible Pouches," 16<sup>nd</sup> IAPRI World Conference Proceedings (on disk). Bangkok, Thailand: Kaserart University (Bangkok, June 9-12, 2008).

Guzman-Siller, Cristina, Diana Twede, Diane Mollenkopf, S. Paul Singh, Bruce Harte and M. Bixby Cooper. 2008. "Reusable Pallet Ownership, Packaging-Logistics Interface: US Grocery Retailer Perceptions," 16<sup>nd</sup> IAPRI World Conference Proceedings (on disk). Bangkok, Thailand: Kaserart University (Bangkok, June 9-12, 2008).

Twede, Diana. 2008. "The Corrugated Fiberboard Box Revolution: History of the Regular Slotted Container," 16<sup>nd</sup> IAPRI World Conference Proceedings (on disk). Bangkok, Thailand: Kaserart University (Bangkok, June 9-12, 2008).

Twede, Diana. 2008. "Universal Principles of Transit Packaging Throughout History," 2008 Transport Packaging Forum Proceedings (on disk). East Lansing: ISTA (Orlando, FL March 17-20, 2008).

Wever, Renee and Diana Twede. 2007. "The History of Molded Fiber Packaging; A 20<sup>th</sup> Century Pulp Story." 22<sup>nd</sup> IAPRI Symposium Proceedings (on disk). Leatherhead, UK: Pira (Windsor, UK September 3-5, 2007).

Gonzalez, Maria Paz, Suzanne Thornsby and Diana Twede. 2007. "Stability of Antioxidant Content in Single-Strength Tart Cherry Nutraceutical Juice: A Comparison between Bottles Made from Glass, PET and Aluminum, and Flexible Pouches, Preliminary Findings" 22<sup>nd</sup> IAPRI Symposium Proceedings (on disk). Leatherhead, UK: Pira (Windsor, UK September 3-5, 2007).

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Twede, Diana. 2007. "The History of Corrugated Fiberboard Shipping Containers," Marketing History at the Center, Proceedings of the 13<sup>th</sup> Conference on Historical Analysis and Research in Marketing, pp 243-246. North Carolina: CHARM Association (Duke University, May 17-29, 2007).

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Twede, Diana. 2005. "The Origins of Paper-Based Packaging," The Future of Marketing's Past, Proceedings of the 12th Conference on Historical Analysis and Research in Marketing, pp 288-300. California: CHARM Association (Long Beach, April 28-March 1). This paper won the Stanley C. Hollander Best Paper Award.

Holcomb, Melissa J. and Diana Twede. 2003. "From Glass, to Iron, to Steel - Why the Tin Can is Not (And the Rest of its Fascinating History)," *The Romance of Marketing History: Proceedings of the 11th Conference on Historical Analysis and Research in Marketing*, pp 162-170. Boca Raton, FL: Association for Historical Research in Marketing. (East Lansing, MI., May 15-18, 2003)

Miteff, Steven P. and Diana Twede. 2001. "Food for Peace: Problems and Solutions," Proceedings of Dimensions 01: The International Conference on Transport Packaging, pp A18-A25. East Lansing: International Safe Transit Association (Orlando, FL, February 26, 2001)

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Bix, Laura, Diana Twede and James Goff. 2001. "The Creation of the School of Packaging at Michigan State University," Milestones in Marketing History: Proceedings of the 10th Conference on Historical Analysis and Research in Marketing, pp 216-229. Long Beach, CA: Association for Historical Research in Marketing. (East Lansing, MI, May 14, 1999 but published in 2001 Proceedings)

Twede, Diana. 2000. "Logistics Issues in Returnable Packaging," 2000 Transportation and Logistics Educators' Conference, published by Ohio State University and the Council of Logistics Management, pp 201-210, (New Orleans, September 24, 2000).

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Twede, Diana. 1999. "Returnable Packaging Issues," Transpack Proceedings, Institute of Packaging Professionals. (Orlando, February 25, 1999)

Twede, Diana. 1999. "Returnable Packaging Trends in Great Britain," Promat Proceedings, Material Handling Institute. (Chicago, February 10, 1999)

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Twede, Diana. 1997. "The Uneeda Biscuit Package: A Historical Landmark," 8th Conference on Historical Research in Marketing and Marketing Thought, pp 75-82. East Lansing: MSU Department of Marketing (Kingston, Ontario, May 22-25, 1997).

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Martin, Michael J., David Closs, Diana Twede and David Johnson. 1991. "Establishing a Polystyrene Recycling Facility in Southeast Michigan - A Business Analysis." Prepared for the Michigan Chemical Council under contract from Michigan Department of Natural Resources, Project # MD-RD-3-33-00220.

Twede, Diana. 1991. "Beyond 'Cardboard': Adopting Alternative Shipping Containers," Logistical Packaging Innovation Proceedings, pp 11-37. (Chicago: Council of Logistics Management)

Twede, Diana. 1991. "Control of Product Quality During Distribution," Proceedings of the IAPRI Seventh World Conference on Packaging, Netherlands: TNO Center for Packaging Research. (Utrecht, Holland).

Twede, Diana and Susan E. M. Selke. 1990. "Purchasing Packaging: Environmental Issues," Proceedings of the Fourth Purchasing and Materials Management Research Symposium. National Association of Purchasing Management.

Twede, Diana. 1990. "Packaging and The Environment," Proceedings of The Brigham Young University Conservation Biology Symposium. (Provo, Utah, 1990)

Twede, Diana. 1989. "Control of Product Quality During Distribution." Proceedings of the 1989 Council of Logistics Management Annual Conference. Chicago: Council of Logistics Management.

Twede, Diana. 1988. "The U.S. Distribution Packaging Supply Industry and Innovation," Proceedings of the 1988 Council of Logistics Management Annual Conference. Chicago: Council of Logistics Management.

Li, Fanfu, James W. Goff, and Diana Twede. 1988. "Correlation of Velocity Change in Free-fall and Shock Machine Impacts." Proceedings of the Second Annual China Packaging Symposium.

Twede, Diana and Harold Hughes. 1988. "Packaging for Logistical Support," Proceedings of the AIAA and SOLE Second Space Logistics Symposium. American Institute of Aeronautics and Astronautics.

Twede, Diana, Keith Helferich, and Steve Young. 1988. "Packaging Expertise on a Disk," Proceedings of Techsource Medical Manufacturing Conference. Ann Arbor, Michigan: Techsource.

Twede, Diana. 1988. "Factors Influencing the Reduction of Distribution Packaging Solid Waste." Proceedings of the 1988 Solid Waste Management and Materials Policy Conference. Albany, N.Y.: Legislative Commission on Solid Waste Management.

Twede, Diana. 1988. "Le Grande Mercier Du Grande Siecle," Proceedings of the Fourth Conference, Historical Research in Marketing. East Lansing: Michigan State University Department of Marketing.

Twede, Diana. 1988. "Packaging Waste Reduction," Proceedings of the National Solid Waste Forum on Municipal Waste Management. Washington DC: Association of State and Territorial Solid Waste Management Officials.

Waldeck, Jeffrey, Diana Twede, James Goff, and Fanfu Li. 1987. "Analysis of Transient Shocks Encountered in Truck Transportation: The Frequency of Occurrence," Proceedings of Packaging Update Conference. East Lansing: Michigan State University School of Packaging. (December 4, 1987)

Twede, Diana. 1987. "The Process of Distribution Packaging Innovation," Proceedings of Packaging Update Conference. East Lansing: Michigan State University School of Packaging (East Lansing, December 4, 1987)

Helferich, O. Keith, Diana Twede, Steve Young, and James Goff. 1987. "The Application of Expert Systems to Computer-Aided Package Design: An Exploration,

Proceedings of Packaging Update Conference, East Lansing: Michigan State University School of Packaging. (East Lansing, MI December 4. 1987).

Twede, Diana. 1985. "Packaging Deregulation," Proceedings of the National Freight Claim Council and ATA Security Council 1985 Joint Annual Meeting. Jacksonville Beach, Florida: Thyra D. Ellis & Associates.

Downes, Theron W., George Arndt, James Goff, and Diana Twede. 1985. "Factors Affecting Seal Integrity of Aseptic Paperboard/Foil Packages," Proceedings of the Third International Conference and Exhibition on Aseptic Packaging: Aseptipack '85. Princetown, N.J.: Schotland Business Research Inc.

## **Creative Endeavors**

Co-curator with Val Berryman and Ilene Schechter for "The Age of Packaging" a major exhibit at the MSU Museum, March-November, 2002. This major exhibit highlighted the forms of packaging throughout history.

Prepared an exhibit commemorating "The School of Packaging's 50<sup>th</sup> Anniversary," for Worldpak 2002, with photos, alumni names and faculty accomplishments.

## **Selected Industry and Conference Presentations**

without proceedings published:

Twede, D. (Presenter & Author), Almenar, E. M, "Proposed Strategy for the US Poultry Industry: Improving the Handling and Packaging of Frozen Poultry Leg Quarters for Global Markets." Presented to USA Poultry and Egg Export Council Market Development Advisory Committee Meeting, December 9, 2009, Georgetown, Washington DC.

"Reusable Shipping Containers: Profitable Investment or Costly Mistake?" presented to *Council of Supply Chain Management Professionals Annual Conference*, October 17, 2006, San Antonio, TX.

"How to Package your Cost-Down Program," presented to *Automotive Logistics Global Conference*, September 14, 2006, Detroit, MI.

"Market-Driven Investigation of Pallet Trends in Grocery Chains," presented to *National Wooden Pallet and Container Association Annual Leadership Conference*, February 27, 2006, Marco Island, FL.

"Innovative Packaging" presented to *Forest Products Society (Great Lakes Section) Annual Seminar*, May 9, 2006, East Lansing, MI.

"What is the best way to Specify Corrugated Board," presented to *TAPPI User Group Meeting*, November 8, 2004, Teleconference.



"History of Logistical Packaging: Universal Principles," *presented to the National Institute of Packaging, Handling and Logistics Engineers' Fall 2003 Training Conference* in Reno, Nevada, November 3, 2003.

"Principles of Wood Packaging - What Should we Teach?" presented to *Wood Container Coalition Meeting* in Chicago, February 14, 2003.

"Implementing a Returnable Transit Unit System," presented to *Autologistics 2001*, September 25, 2001 in Dearborn, MI.

"Reusable Crates: When do they Make Sense?" presented to *Take it Back 2001*, April 19, 2001 in Washington DC.

"Ancient Transport Amphoras: The First Consumer Packages, presented to the Central Michigan Society of the Archaeological Institute of America, April 30, 2001 in East Lansing.

"Control of Product Quality in Distribution," presented to the *Transportation Consumer Protection Council's Annual Conference*, March 27, 2001 in Las Vegas.

"Returnable Packaging," presented to the *NIPHLE Spring Meeting* in Aberdeen, MD., May 21-24, 2000.

"Issues in Returnable Logistical Packaging," *Institute for Operations Research and the Management Sciences Spring Meeting*, Salt Lake City, May 7-10, 2000.

"Advances in Returnable Transit Packaging," *Pack Expo Las Vegas*, October 18, 1999.

"Using Damage Claim Information to Reduce Damage," *Office Furniture Distribution Association's Packaging and Damage Claim Seminar* in Holland, MI, September 16, 1999.

"Current Issues in Returnable Packaging" *West Michigan IoPP's 12th Annual Conference* in Grand Rapids, May 20, 1999.

Co-Director of the *9th Conference on Historical Analysis and Research in Marketing*, May 13-16, 1999.

"Returnable Packaging for Fresh Produce" *Pickle Packers International Spring Meeting* in East Lansing, April 14, 1999.

"Current Issues in Returnable Packaging" *Reusable Plastic Container and Pallet Association Spring Meeting* in Charlotte, North Carolina, April 12, 1999.

"Current Issues in Returnable Packaging" *Cleveland IoPP meeting*, January 12, 1999.

"Strategies to Reduce and Reuse Transport Packaging," *Michigan Recycling Show: 16th Annual Conference and Expo*, Michigan Recycling Coalition, East Lansing, May 20, 1998.

"Cut Packaging Waste and Cost," *Indiana Institute of Recycling Seminar*, Lafayette, Indiana, September 12, 1997.

"Packaging for Profit" *International Hardware Week*, Chicago, August 10, 1997.

"Returnable Packaging" *Transportation Consumer Protection Council's 23rd Annual Conference*, Las Vegas, April 27-30, 1997.

"Returnable Packaging in the Commercial Sector," *National Institute of Packaging, Handling and Logistics Engineers' Packaging, Handling and Technology Conference*, November 4-9, 1996.

Chaired a session of the *Ninth IAPRI World Conference*, Brussels, September 4-6, 1995.

"Tool Packaging Value Analysis," *Hand Tools Institute New World of Packaging Possibilities Seminar*, Chicago, June 20, 1995.

"Distribution Packaging Waste Reduction," *Michigan Department of Natural Resources' Waste Reduction and Energy Efficiency Workshop*, Detroit, December 14, 1994.

"Logistical Packaging Waste: Government Policy Recommendations," *NIPHLE Military/Industrial Technology Symposium*, East Lansing, May 16-18, 1994.

"Packaging for the Future," *American Furniture Manufacturers Association's Joint Manufacturing/Human Resources Divisions' Meeting*, Raleigh, NC, February 23-25, 1994.

"Overview of Packaging Requirements in the Furniture Industry," *The Dollars and Sen\$e of Packaging: Spring Seminar*, Great Lakes Section of the Forest Products Society, Grand Rapids, May 27, 1993.

"Packaging Liability in Transit and Warehousing," *Petroleum Packaging Council Annual Meeting*, Tucson, September 15, 1992.

"Proper Handling/Packaging to Reduce Damage," for *American Furniture Manufacturers' Association Furniture Packaging Workshop*, Charlotte, North Carolina, June 2-3, 1992.

"Logistical Packaging," for *NIPHLE Packaging Handling & Technology Symposium*, San Diego, Calif, October 14-18, 1991.

"Polystyrene Sources for Recycling: Results of a Survey," for seminar on *Establishing a Polystyrene Recycling Facility*, MSU Industrial Development Center, September 19, 1991.

"Managerial Methods of Controlling Product Quality in Distribution" for *IoPP West Michigan Annual Conference* in Traverse City, MI May 16, 1991.

"Integrated Packaging Systems for Transport and Distribution," *Pack Expo '90*, November 1990.

"Foreign Soil: Packaging Rocks from Mars," Poster session with Earl Robinson and Gary Burgess, *The Case for Mars IV*, Boulder, Colorado, June 1990.

"An Analysis of the United States Market for Food in Tubes," *Tube Council of North America Annual Meeting*, Clifton, New Jersey, September 1989 (results of research conducted with Dr. Forrest S. Carter).

Track chairperson for *1988 Council of Logistics Management Annual Conference*; first CLM conference tract on the subject of "Packaging Issues in Logistics," Boston, Mass.

"Packaging for Shipment," presented to the *Michigan U.P. Cottage and Small Industry Conference, May 15, 1987; and to the Packaging to Sell, Packaging to Ship Conference*, November 3, 1987; Marquette, Michigan: Northern Michigan University.

"Measuring the Dynamics of Your Distribution Environment: Fixing the Blame or Controlling the Causes of Damage?" *Shippers National Freight Claim Council Annual Conference*. New Orleans, Louisiana, March 1987.

"Research on Retail and Distribution Package Standardization and Performance Standard Development," Presentation to the Grocery Manufacturers Association "*Like Retail Packaging*" Task Force Meeting, Chicago, Illinois, January, 1987.

"Efficient Distribution Packaging." *Warehousing Education and Research Council Annual Conference*, Atlanta, Georgia, April 1986.

## **Reports or Studies**

Twede, Diana, Almenar, Eva M., Harte, Bruce, Siddiq, Muhammad, Booren, Alden M., Rubino, Maria, Harte, Janice B., Auras, Rafael. 2009. "Proposed Strategy for the US Poultry Industry: Improving the Handling and Packaging of Frozen Poultry Leg Quarters for Global Markets." Stone Mountain, GA: USA Poultry and Egg Export and Egg Council. [www.usapeec.org](http://www.usapeec.org).

Bix, Laura, Robb Clarke, Hugh Lockhart, Diana Twede and John Spink. 2007. "The Case for Global Standards," Final Report for the GS1 Global Healthcare Users Group (GS1 HUG™).

Twede, Diana, Diane Mollenkopf and Cristina Guzman-Siller. 2006. "Market-Driven Investigation of Pallet Trends in Grocery Chains," Final Report for the National Wooden Pallet and Container Association (Alexandria, VA).

Twede, Diana. 2005. "Packaging Opportunities for Mango Products in Maharashtra, India," part of a report for MSU Partnerships for Industry Development (CANR International Programs), East Lansing, MI.

Tazelaar, Jeff and Diana Twede. 2003. "Environmental and Cost Drivers for Reusable Produce Containers," a report for the Corrugated Packaging Alliance, Elk Grove Village, IL.

Twede, Diana and Bill Somerville. 2003. "Packaging Opportunities for Fruit and Vegetables in Ghana," part of a report for MSU Partnerships for Industry Development (CANR International Programs), East Lansing, MI.

Twede, Diana. 2001. "Produce Packaging Issues in Guatemala: An Exploratory Study," a report for MSU Partnerships for Industry Development (CANR International Programs), East Lansing, MI.

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