

Thomas J. Dunn, BA MFS

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Flexible Packaging Professional | Materials•Processes•Applications•Compliance•Safety

“Fact-based decision-making in pursuit of business excellence.”

- ✓ 40+ years' experience in developing flexible packaging products, processes, and platforms
- ✓ Inducted into National Packaging Hall of Fame (2012)/Selected *Fellow*, Society of Plastics Engineers (2016)
- ✓ End user contact and support always priorities.
- ✓ Responsibility for compliance of +\$1B product mix with US and international food safety laws
- ✓ Managed intellectual property strategy
- ✓ *Food Safety Training*: Implementing SQF (2013); HACCP Manager (2013); Principles of Internal Auditing (2014); Advanced HACCP (2015) Prerequisite Programs (2016); HACCP for Manufacturing Food Packaging Materials (2019); US FDA *Food Safety Qualified Individual*
- ✓ Continuing involvement with environmental and circular economy issues-Editor

Tom Dunn is an accomplished developer and new product development manager of flexible packaging emphasizing materials and application of their features for the benefit of packaging users. He managed product development for his long time employer from a narrow \$0.1B product line to an broad one worth over \$1.1B. He is now a private consultant to producers and users of packaging for food and pharma, and an active participant in national and international packaging organizations.

Professional History

Flexpacknology LLC,	Atlanta, GA	(January 2011-Date)	Managing Director
• <i>Consultant</i> to users and producers of flexible packaging regarding product, process and platform development, intellectual property management and food safety compliance • <i>Expert witness</i> regarding product liability, flexible packaging for shelf stable acidic canned foods and pouch failure modes, tariff classification, and patent infringement; • <i>Package developer</i> for MAP food product with Internet distribution channel; • <i>Trouble shooter</i> for package failure from inadequate chemical resistance; • <i>Program designer</i> of validation and verification program for PCR fiber safety in direct-food-contact paper packaging; • <i>Assessor</i> of FDA compliance of direct-food-contact packaging product line. • <i>Market analyst</i> for global applications of flexible packaging formats. • <i>Publisher/Presenter</i> at conferences and webinars of industry and educational groups. • <i>Advisor</i> on Good Manufacturing Practices for safe food packaging manufacturing.			
Printpack, Inc.,	Atlanta, GA	(August 1981-December 2010)	

Corporate Director of Product Development

Divisional Vice president of Manufacturing (Applied Physics Research Division)

Successful 30 year career focused on product and process development. Efforts contributed to multiple +\$10 million product platforms including:

- 1) extrusion laminated **metallized OPP snack food** packaging;
- 2) **fully-coextruded** forming/nonforming web for **frozen boil-in-bag meals**;
- 3) **nitrogen flushed** vertical form fill seal **snack food** packaging;
- 4) **modified atmosphere** packaging for **fresh-cut produce**;
- 5) **High Moisture Barrier** easy-open HDPE blown coex for dried food box liners
- 6) **High barrier** pre-made **Stand-up Pouches**.

Direct responsibility for inventorying raw material status and certifying domestic and international **food safety compliance** (US, EU, Canada, China, Indonesia, and others); Developed corporate intellectual property policy and coordinated ongoing activities with patent counsel; represented company at NSF-sponsored Center for Advanced Processing and Processing.

Significant roles in corporate interdepartmental planning committees:

- 1) Corporate **Integrated Manufacturing Systems** (MRP II) - *Directors Committee*;
- 2) **Total Quality Management** - Steering Committee (*Co-chairman*, Supplier Certification Subcommittee);
- 3) **Advanced Cost Management** System - *Client Review Committee*;
- 4) Corporate Growth Policy Committee;
- 5) **Strategic Purchasing** Committee;
- 6) **ISO 9001** Policy Committee (*Leader*, Product Design Subcommittee);
- 7) **Stage-Gate** Implementation Committee;
- 8) **M&A** Due Diligence Committee (*intellectual property responsibility*).

Principle investigator for dedicated development initiatives:

- 1) Manufacturing Vice president for wide web; high speed **micro-embossed products**. Produced a four million square foot commercial order within six months of product's development.
- 2) Conceptualized, organized, and tracked \$2.4mm R&D Contract to develop **packaging systems for advanced food processes**: U.S. DOD -Combat Feeding Directorate). Project managed on time and on budget with commercial results.

Technical Director:

Managed member committees for specifications and test methods; prepared and delivered testimony concerning government regulatory proposals; planned and directed member meetings; represented the industry on committees of government agencies and trade group alliances.

Keller Graduate School of Management, Decatur, GA (1997-98)

Graduate Instructor:

Taught "Product Development Management" (Marketing Department).

(various) Columbus, OH/ Cleveland, OH (July 1973-June '79)

Environmental Planner:

Staff positions with consultants and government agencies (Ohio Dept. Nat. Res., Northeast Ohio Reg. Sewer Dist.) regarding water quality management, environmental impact assessment, discharge monitoring, and land capability analysis.

Education

Yale College:

B.A. *summa cum laude* (1971) Combined Science: Chemistry & Biology *Phi Beta Kappa*
Honor Society; Varsity Track

Yale School of the Environment: (Previously Yale Forestry and Environmental Studies)

M.F.S. (1973) *National Science Foundation Graduate Fellow*

Cleveland State University:

M.B.A. course work 1977-1979 *Beta Gamma Sigma* Business Honor Society.

Georgia State University:

Management Development Program (1989)

Georgia Institute of Technology:

Advanced Innovation Management (2004)

Industry & Professional Activity & Leadership

Flexible Packaging Assn	Product Dev. Mgmt. Assn	Society of Plastics Engineers
Chairman, Technical Committee Member, Solid Waste Task Force	Board of Directors, Georgia Chapter Treasurer, Georgia Chapter	Chairman, Flexible Packaging Div. Division Board of Directors
ASTM	TAPPI	RadTech North America
Member F2 (Flexible Barrier Mats.) Member D10 (Packaging)	Chairman, Flexible Packaging Comm. Chairman, Technical Program Comm. Winner: 2002 Div. Technical Award	Board of Directors Chairman EH&S Subcommittee

Professional Honors & Awards

2016 Selected:	Fellow (Society of Plastics Engineers)
2014 Recipient:	Riester-Davis Award for Lifetime Achievement (Food Processing & Packaging Division- Institute of Food Technologists)
2012 Panelist	Radiation Technology in Development of Advanced Packaging Materials for Food Products"; International Atomic Energy Commission
2014-21 Panelist:	USDA National Institute of Food and Agriculture: Improving Food Safety & Improving Food Quality
2012 Inductee:	National Packaging Hall of Fame (Packaging Machinery Manufacturers Association)
2009-11 Member:	Center for Advanced Processing and Packaging Studies (National Science Foundation)
2002 Recipient:	Zweig Prize for Technical Contributions (Flexible Packaging Division- Technical Association of the Pulp and Paper Industry)

Peer Reviewed Publications

Year	Title	Publisher	Abstract
2010	Non-Foil High Barrier Lamina-tions	Society of Plas-tics Engineers; FlexPackCon 2010 (selected "best paper")	The US Army Natick Soldier Research, Development and Engineering Center (NSRDEC) desired to eliminate foil from the packaging materials used in military rations for several reasons. In doing so, the oxygen, wa-ter vapor and light barrier functions of foil are lost to the packaging. Lam-inations of all plastic materials (including various barrier coatings, barrier resins, and composite nanoclay/polymer blends) were evaluated against the functional barrier levels found in foil laminations. Oxygen and light barrier protection matched foil laminates, but water vapor barrier less, but not to detriment of product shelf life.

Book

2022	<i>The Future Of Sustainable Flexi-ble Packaging-Long-Term Stra-tegic Forecasts To 2032</i>	Smithers	Examination of sustainable flexible packaging developments for con-sumer-packaged goods, food as well as non-food, over the next 10 years, and how users and producers will adjust, considering how techno-logical developments, regulations, consumer expectations, regulatory proposals, and major CPG Cos. plans will shape the 2032 market.
2014	<i>Flexible Packaging Manufactur-ing: Materials, Machinery, Tech-nology</i>	Elsevier (2014)	Comprehensive presentation of the basic principles of materials, ma-chinery and processes used to manufacture flexible packaging. Design criteria and measurement techniques are addressed in the context of fit-to-make and fit-to-use decision making

Book Chapters & Articles

2022	<i>Achieving a True Circular Econ-omy for Plastic Packaging</i>	Converting Quarterly	An analysis of the risks of recycled plastics in food packaging, emerging technical solutions, and political options for technology implementation
2020	<i>Film Extrusion Manual, 3rd Ed</i>	TAPPI Press	Chapter Author; "Critical Requirements for Structures", "Quality Control & Physical Testing".
2019	<i>Sustainable packaging for natural foods</i>	Natural foods Insider	Article highlighting that natural food products packaging must protect food quality and safety while connoting clean labels and sustainability.
2017	<i>Extrusion Coating Manual, 5th Ed</i>	TAPPI Press	Chapter Author; "Trends in Extrusion Coating Materials"; "Critical Re-quirements for Structures", "Quality Control & Physical Testing", "Predic-tive and Preventive Maintenance".
2015	<i>Food Packaging chapter in "Kirk-Othmer Encyclopedia of Chemi-cal Technology"</i>	Wiley (2015)	Review of shelf life limiting factors for food types; modes of protection provided by packaging of various types, and chemical interaction be-tween packages and food.
2012	<i>Multifunctional and Nano-reinforced polymers for Food Packaging Chapter: "Ethylene-norbornene copolymers and advanced single-site polyolefins"</i>	Wiley (2012)	The relevance of this information to compounding a variety of nano-composite polymers is discussed. Data from the literature and un-published experiments are summarized with an eye towards understand-ing the growing potential of these materials in commercial food packag-ing applications.
2011	<i>Handbook of Trouble Shooting Plastic Processes Chapter: "Ad-hesive Laminating"</i>	Woodhead Publishing (2011)	Dry-bond laminating of plastic films including: details on equipment and material suppliers: basic chemistry and measurement of adhesive strength: process controls for both the adhesive application process and basic plastic web handling procedures: effects of variation in down-web and cross-web thickness and surface integrity of plastic films.
2001	<i>Snack Foods Processing Chap-ter: "Product protection and packaging Materials"</i>	Technomic Publishing (2001)	Quality properties of snack foods and their relationship to packaging materials, Structure and function of snack food packages for extended consumer acceptability; physical material properties affecting packaging machine efficiency and productivity.

Advisory Committees

2012	<i>Applications of Radiation Tech-niques in Development of Ad-vanced Packaging Technologies</i>	UN International Atomic Energy Agency	Advisory committee on global program to enhance food safety using in-package radiation sterilization of pathogen-susceptible fresh and pro-cessed foods.
2014	<i>Enhancing Food Safety through Improved Processing and Pack-aging Technologies</i>	USDA National Institute of Food and Agriculture	Grant review committee for Enhancing Food Safety through Improved Processing and Packaging Technologies
2014, 2018, 2020, 2022	<i>Enhancing Food Quality through Improved Processing and Pack-aging Technologies</i>	USDA National Institute of Food and Agriculture	Grant review committee for Enhancing Food Quality through Improved Processing and Packaging Technologies
2020-2021	Technical Working Group	International Featured Standards (IFS)	Provided technical review and revisions to proposed changes to IFS PACsecure Version 1 in preparing to IFS PACsecure 2(2021) for GFSI review

Expert Witness Engagements

2023	Eighteenth Judicial Circuit in and for Seminole County, Florida Case No. 2019-CA-000787-L	Sale of packaging alleg-edly unfit for use in packaging powdered nutraceutical products	Prepared expert report and provided deposition testimony regarding fitness of use and manufacturing of stand up pouches for powdered nutraceutical products.
2023	US District Court Northern District of Texas, Dallas Division Civil Action No. 3:21-CV-0008-G	Sale of packaging mate-rials allegedly unfit for stated use for fried tortilla chips	Prepared expert report and provided deposition testimony regarding fitness of use of grease resistant packaging material for fried salted snacks
2018	US Court of International Trade No. 15 – 0024	Proper tariff classification of laminated blister packaging imports	Prepared Expert Report and provided deposition testimony regarding na-ture of imported goods
2017 & 2018	FillShape S.r.L. and IMA S.p.A. v. Indag GmbH & Co. Betriebs KG	Alleged infringement of US patent regarding liquid flexible packaging	Preparing Expert Report regarding prior art and obviousness of alleged patented (US) technology.

	and Wild Parma S.r.L., Civ. No. 3:13-cv-1216-ADC-BJM (D.P.R.)	filling equipment	
2016	(Canadian) Federal Court File No.: T-2051-10	Estimate of monetary damages owed to patent holder by patent infringer	Prepared Expert Report and court testimony describing use requirements, duration of qualification efforts and estimated financial benefits
2015	Western District of Wisconsin Court File No. 14-CV-536	Merchantability of plastic film sold for flexible packaging lamination	Prepared Expert Report and deposition testimony regarding defective material claims
2014	Superior Court of Connecticut (Middletown District) DOCKET NO. MMX-CV13-6009442-S	Product liability regarding thermoformed packaging for fresh vegetables	Prepared Expert Report and provided demonstration of incompatibility of thermoformed packaging with plaintiff's selected lidding material.
2013& 2018	I:09-cv-00095-JMB	Proper tariff classification of laminated packaging	Prepared Expert Report and provided deposition testimony regarding nature of imported goods