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## **CAUGHT 'N THE NET**

### **Food-Supply Sustainability**

By Dr. Gary C. Smith



In August 2009, Wal-Mart announced it would eventually require all of its suppliers to provide sufficient information about their products to allow computation of a "Sustainability Index." In the food industry, growers, processors, suppliers, transporters and retailers are considering "green," "fair" and "ethical" measures to quell as many sustainability concerns as they can. But, what is "sustainability"? It actually means "to keep something going" and must have a modifier (e.g., "food-supply") to define what "something" is.

I recently reviewed more than 20 trade-publication articles and concluded that: (a) "food-supply sustainability" is a three-legged stool comprised of considerations of economics (it must be profitable to grow, process, supply, transport and retail food), environmental stewardship (its production, processing and transportation should not adversely affect air, soil, water or the surrounding natural environment) and societal ramifications (it must be fair and ethical to animals and to all people involved in the food-supply chain), (b) although 54 to 82% (across studies) of shoppers say they consider sustainability in food-buying decisions, the majority say the term is nebulous and they don't know what it means. When asked what they think it means, consumers said "Natural," "Organic," "Locally Grown," "Humanely Treated," "Environmentally Friendly," "Climate Saving," "Small Carbon Footprint," "Energy Saving," "Free Range," "Free Trade," "Fair Worker Treatment," "Social Responsibility," and "Corporate Responsibility," and (c) in its broadest sense, "food-supply sustainability" equates to "food security," i.e., Can we feed 9 to 10 billion people, on planet Earth, in the year 2050—and beyond?

**What are food manufacturers doing about it?** The Hartman Group (2008) reported that "Sustainable" (at 21%) is the 8th most important label/phrase considered by food shoppers, behind Fresh (76%), Pesticide-Free (48%), Hormone-Free (35%), Natural (32%), Certified Humane (31%), Origin Of Ingredients (28%) and Locally Grown (23%). Five studies suggest that among green/fair/ethical products, a clear hierarchy of relative importance has developed for consumers at supermarkets (Natural, then Locally Grown, then Organic) and at restaurants (Natural, then Organic) while "sustainable" is a term not understood by most consumers.

Most important at the moment is whether "emphasis on sustainability" is sustainable—i.e., is it a fad, a trend or a game-changer. Recent reports by both Yankelovich (2009) and Mintel (2009) suggest that consumers are becoming less willing to pay for it—expecting it to become table stakes. If Wal-Mart causes something like the Sustainability Index to be a pre-requisite to purchase of a food product for sale in its stores and you want to sell to Wal-Mart (and, probably others), get ready to formulate answers to 15 questions—one of which is "Before beginning a business relationship with a manufacturing facility, do you evaluate quality, capacity and social compliance for production?"

*For questions or comments about this article, email [gsmith@food-safetynet.com](mailto:gsmith@food-safetynet.com).*

# Nutritional Labeling: Chemical Analysis, Database or Both?

Robert Levy, Technical Supervisor

Most products sold in today's health conscious society require nutritional data. Even if the product is not for retail sale, it is quite likely that wholesale purchasers will require the information, as will restaurants. The current marketplace trend is toward more labeling and labeling of more "exempt" commodities; a trend that will only increase. A decision on how to generate nutritional label data is then also required and can be confusing.

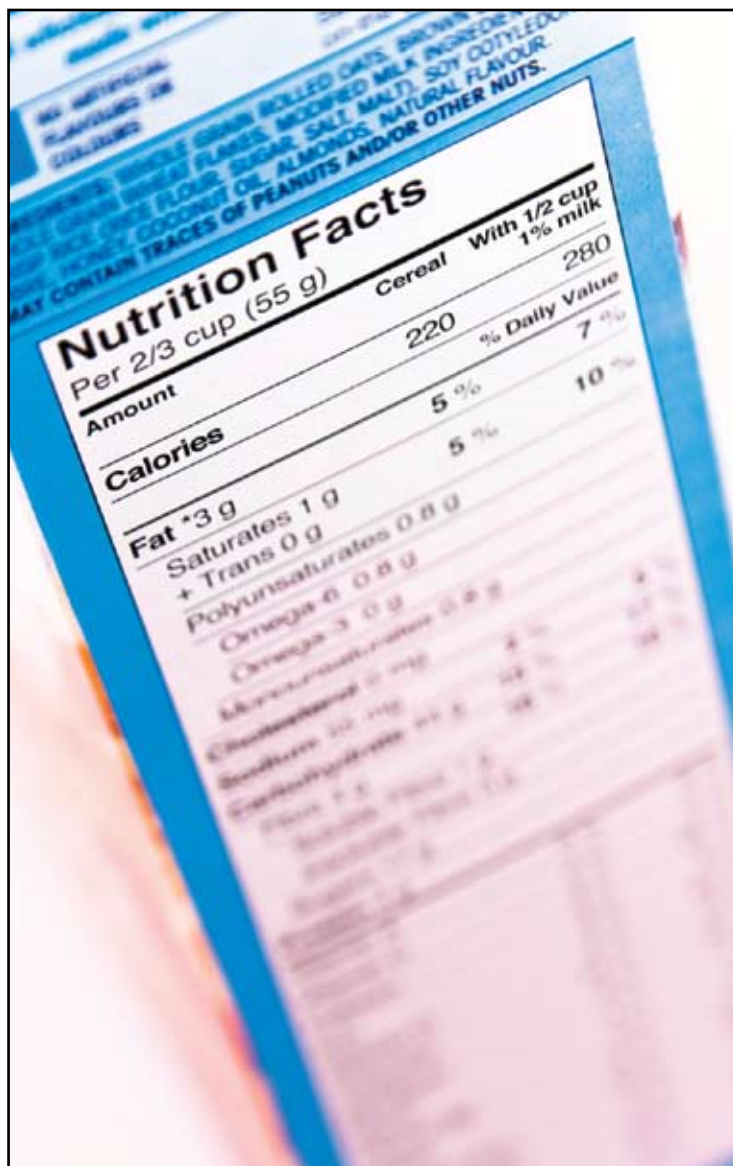
There are **three options** to consider for the development and preparation of a label. Regardless of which route is used, Title 21 CFR is very explicit that it is the manufacturer's responsibility to ensure accuracy of all label components to include nutritional data, net contents, standards of identity and in fact, the entire packaging.

The first, most traditional and most precise method is **laboratory chemical analysis**. This is the recommended method for products and is now routinely available in "package form" in a timely and cost effective manner. It provides the most accurate representation of the product and accounts for variability found in similar ingredients from differing vendors and across production lots. For analysis, it is recommended to collect thirteen different lots of the product for compositing and testing. This minimizes daily variations in production and produces a label of averaged data. To validate

regulatory compliance, agencies use the same approach of compositing to determine if a product may be misbranded (this includes nutrition data as well as net content data).

The second option, **database nutrition facts panel**, is also recognized and accepted for product labeling. As noted above, the same responsibility applies no matter how the label is generated. The nutritional database label is based on accepted databases of ingredients used to electronically compile the data necessary to produce the nutritional facts panel. This method is reasonably accurate but faster and less costly to obtain. It must be noted though that many database ingredients do not match proprietary ingredients purchased for production, and ultimately database accuracy is still the food producer's responsibility or liability. For many products, this may be an acceptable method; however, it shouldn't be chosen when a label includes specific health claims or when ingredient consistency is difficult to monitor or control (i. e. seasonal or regional variations in produce).

This third option is to produce the label from an available **database, but supplement** with analytical testing for fat, moisture, protein, carbohydrate and other nutrients which are difficult to approximate via the database. It is also necessary to include testing for required labeling components when a particular ingredient or formulation



.....  
**It is the manufacturer's responsibility to ensure accuracy of all label components to include nutritional data, net contents, standards of identity and in fact the entire packaging.**  
.....

is specifically designed to be different or superior to commonly obtained ingredients. For instance, the use of vitamin enrichments in an ingredient that is not normally used might require analysis for vitamins A or C. Additionally, the need for testing will be need for adding voluntary nutrients to a label. Supple-

menting the database data with analytical results for voluntary nutrients is always recommended in that these data are often not available or in a database by virtue of another database.

All three options are used in today's market place, and each serves a needed based on costs and control manufacturing. An exception exists with the changes for labels that began in January 2006; the requirement to include data for trans fatty acids. In this case, testing must be done since current databases are still insufficient for this requirement. ■

*For more information, email [rlevy@food-safetynet.com](mailto:rlevy@food-safetynet.com).*



## Third Party Audits – *Do your suppliers need them?*

By Sherri L. Jenkins, Vice President of Auditing and Consulting Services

### **What good things can third party audits do for you?**

Third party audits should be performed by a neutral and unbiased auditor. Thus making the information obtained come from an independent, unbiased individual. The audit questions should be explanatory enough so that the auditor does not have to include their personal interpretations. Professional experience is different than personal interpretations, because the individual has had experience in that area whereas a personal interpretation is more along the lines of the individual thinks it should be that way with no real reason or explanation.

**Can third party audits be helpful?** If third party audits are used in the context in which they were performed, then yes, they are helpful. In most cases, it is not feasible for you to visit each of your suppliers every year to ensure they are following good food safety practices, the regulatory guidelines, etc. This is where third party audits can be used.

### **Is anything uncovered in the short time frame?**

A seasoned, observant auditor will know the difference between the 'dog and pony show' and the one that occurs day-to-day with or without the auditor present. An auditor that connects the pieces to tell the whole story is extremely instrumental for a facility. Reviewing documents and programs to make sure they contain all the expected parts per the audit requirements is the first step. The next step is to make sure what is documented actu-



ally happens in the production area. And finally, that the facility knows their own programs, as the facility management team is the expert.

### **Overall, are third party audits a good or bad thing to have?**

Third party audits that are required for your suppliers can be a valuable thing to have when included in your pre-purchase specification program. You will find out if the facility has programs documented, if they are following them, and if everything is recorded correctly. You will also be able to determine if the facility's building and production areas are sufficient for producing the products in which you are purchasing, among other items. ■

*For more information, email [sjenkins@food-safetynet.com](mailto:sjenkins@food-safetynet.com).*

## Welcome Melinda Hayman & Ann Muriu

**Melinda Hayman** joined Food Safety Net Services (FSNS) in September 2009 as Scientist-Technical Services. At FSNS, Melinda provides technical support to Special Projects and Corporate Technical Services, as well as technical support for clients. She has several years experience as a food safety and quality specialist, working in both industry and government. She worked as a Food Microbiologist for the Commonwealth Scientific and Industrial Research Organization (CSIRO) in Sydney, Australia, and as a Post Doctoral Scientist for Altria Client Services. Melinda has a Ph.D. in Food Science from The Pennsylvania State University and a BS (Hons) in Advanced Microbiology and Biochemistry from The University of Sydney. She has worked on research projects encompassing a wide range of food commodities and has expertise working with a number of foodborne pathogens, especially *Listeria monocytogenes*. Her primary interests lie in the control of microorganisms in foods and related products, food processing technologies, factors that influence sensitivity of microorganisms to processing technologies, and detection technologies for foodborne microorganisms. If you are in need of Special Project services from FSNS, including challenge studies, validation studies, or any non-routine microbiological evaluations, Melinda is prepared to design and implement customized projects relative to your specific needs. Further, Melinda joins forces with the team of

technical experts that FSNS offers the food industry to assist you in your food safety and quality programs. Melinda can be contacted at [mhayman@food-safetynet.com](mailto:mhayman@food-safetynet.com) or (210) 308-0675 (x244).

**Ann Muriu** joined Food Safety Net Services (FSNS) in 2009 as the Quality Assurance Manager. Ann has experience in Quality Assurance Management for Food Testing Laboratories. She is trained in ISO/IEC 17025 Quality Management Systems and has years of experience in the industry as a Quality Assurance Manager implementing and maintaining regulatory agency requirements such as: A2LA, USDA, ELAP, FDA and IMS. Throughout her career, Ann has had the opportunity to improve quality systems, increase awareness of standards and requirements in the laboratories, and receive great reviews from auditors as well as customers. Ann obtained her BS degree in Biochemistry and BA in Chemistry from California State University, Long Beach and her MBA from California Baptist University, Riverside. Ann's role at FSNS is to ensure that strength and effectiveness of our laboratory quality programs as well as provide supportive information to our clients as an extension to the manufacturing process. Ann can be contacted at [amuriu@food-safetynet.com](mailto:amuriu@food-safetynet.com) or (210) 308-0675 (x216). ■

## Implementation for the BRC Standard for Food Safety

The Global Standard for Food Safety, Issue 5, is published by the Retail British Consortium (BRC). Originally developed in the UK Retail Market, it has acquired world wide recognition as the framework for any business to produce a safe and quality product. This training will provide you with the necessary knowledge and information to implement the BRC Global Food Safety Standard, Issue 5, in your facility. It will specifically cover the following topics:

- Senior Management Commitment
- The Food Safety Plan – HACCP
- Food Safety / Quality Management System
- Site Standards
- Product Control
- Process Control
- Personnel

### Course Dates:

February 16-17, 2010 • San Antonio, TX  
May 11-12, 2010 • San Antonio, TX  
August 17-18, 2010 • San Antonio, TX  
November 9-10, 2010 • San Antonio, TX

*Registration Fee: \$595.00 (two day course)*

## HACCP Training

Join us for this 2-day course – fully accredited by the International HACCP Alliance – taught by **Dr. Gary Smith** of Colorado State University and **Sherri Jenkins**, Vice President of Auditing and Consulting at Food Safety Net Services.

### 2010 Course Dates:

March 16-17, 2010 • San Antonio, TX  
June 1-2, 2010 • San Antonio, TX  
September 14-15, 2010 • San Antonio, TX  
December 14-15, 2010 • San Antonio, TX

*Registration Fee: \$695 per person.*

Discounts: 10% if registering more than one person for the course.

Registration fee includes: All course materials, Lunch on both days of course and Certificate of Completion.

**REGISTER NOW!** Call Wendy Harmon at 888.525.9788 x262 (toll free) or email Webdy at wharmon@food-safetynet.com.



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*For comments on this newsletter, please contact Wendy Harmon at 888.525.9788 or wharmon@food-safetynet.com.*

**Gina Bellinger**  
President  
gbellinger@food-safetynet.com • 210.384.3424

**John Bellinger**  
Chairman of the Board  
jbellinger@food-safetynet.com • 210.477.3636

**Dr. Gary C. Smith**  
Partner, Board of Directors  
gsmith@food-safetynet.com • 210.913.8939

**Dr. Wendy Warren**  
Chief Science Officer  
wwarren@food-safetynet.com • 210.340.8870

**Alan Uecker**  
Chief Financial Officer  
auecker@food-safetynet.com • 210.477.3639

**Sherri Jenkins**  
Vice President,  
Auditing & Consulting Services  
sjenkins@food-safetynet.com • 210.542.8587

**Dr. Keith Belk**  
Director of Scientific Affairs  
kbelk@food-safetynet.com • 970.215.3486

**Tim Santy**  
Director of Laboratory Operations  
tsanty@food-safetynet.com • 210.477.3631

**Edward Miller**  
Director of Human Resources  
emiller@food-safetynet.com • 210.477.3637

**Wendy Harmon**  
Customer Service Coordinator  
wharmon@food-safetynet.com • 210.384.8028

**David Bosco**  
Regional Laboratory Manager  
dbosco@food-safetynet.com • 602.385.4030 x5209

**Dustin Morgenroth**  
Laboratory Manager, San Antonio  
dmorgenroth@food-safetynet.com • 210.308.0675 x218

**April Garza**  
Interim Laboratory Manager, DFW  
agarza@food-safetynet.com • 972.602.2078 x5109

**Greg Schultz**  
Laboratory Manager, Green Bay  
gschultz@food-safetynet.com • 920.465.4013

**Melissa Farrell Evans**  
Laboratory Manager, Atlanta  
mevans@food-safetynet.com • 770.788.1940

**Paul Browning**  
Laboratory Manager, Fresno  
pbrowning@food-safetynet.com • 559.250.8917