

Horizon Watch: Ensuring the Business of Flavors

FEMA reviews the emerging challenges that will impact the flavor industry for years to come.

The specter of California's Prop 37 hung over the proceedings of the 43rd Fall Symposium of the Flavor and Extract Manufacturers Association (FEMA) in Jersey City, New Jersey. The ballot measure, which was eventually voted down 53.1% to 46.9% during the November U.S. election, would have required labeling of genetically engineered products sold in the State of California, including fresh produce and processed foods ("any food other than a raw agricultural commodity and includes any food produced from a raw agricultural commodity that has been subject to processing such as canning, smoking, pressing, cooking, freezing, dehydration, fermentation or milling"). Genetically engineered ingredients would have been unable to be branded as "natural," "naturally made," "naturally grown," "all natural" or "any words of similar import that would have any tendency to mislead any consumer."

In the lead-up to the vote, industry spent tens of millions of ad dollars to fight the measure. Yet, despite the victory—and the recent debunking of Séralini et al.'s "Long term toxicity of a Roundup herbicide and a Roundup-tolerant genetically modified maize"^a—industry can expect to face further GMO challenges, particularly in the U.S. states of Vermont and Connecticut, according to the *Los Angeles Times*.

Following the ballot defeat, Ronnie Cummins, director of the Organic Consumers Association, told the *Times*, "We're now going to take the campaign to the next stage. We'll keep up public education nationwide and step up our marketplace pressure."

As seen in the *Times* and elsewhere, much of the fight has taken place in the media. During a FEMA dinner presentation, Jon Entine, senior fellow at the Center for Health & Risk Communication and STATS, George Mason University, noted that most journalists, when covering issues purportedly affecting health or the environment, don't take into account economic downsides that might result from expanded regulations—"better safe than sorry" is the default philosophy. At the same time, industry's scientific experts are at a disadvantage compared to those tied to NGOs. Entine explained that journalists perceive NGO/advocacy scientists as unbiased, while those representing industry are compromised. Entine recommended that industry identify and cultivate "sympathetic" experts from academia to offset this imbalance.

At the same time, said Kimberly Reed, executive director of the International Food Information Council (IFIC) Foundation,

consumers are "feelers and believers." And as such, social media leads food ingredient coverage, far outpacing traditional media. In this context, friends and family are viewed as far more trustworthy than newspapers. They are also off-put by complexity, and so any consumer messaging needs to be simplified.

Prop 37, which was widely positioned as a consumer right-to-know effort, was particularly troubling because no harm needed to be shown to allow legal action against food manufacturers. This was one test case that demands ongoing analysis by all stakeholders.

Food, Beverage and Supplement Development in the Right-to-Know Era

Despite Prop 37's defeat, speaker Marc Brush, editor in chief at *Nutrition Business Journal*, said the effort has emboldened the so-called food movement, which he described as a "manifestation of flux in the system" in which consumers seek to "reclaim their food" through increased transparency. Whether or not ballot initiatives such as Prop 37 become law, Brush has concluded that food and beverage R&D for much of the next 20 years will focus on undoing the complexities of the past 50 years.

The stakes are significant, said Brush, considering that the natural and organic food industry could be worth a quarter of a trillion dollars by 2021. According to his figures, "engineered," or processed, food is the leading revenue driver in these categories, led by functional food and supplements. These nutrition categories—specifically sports nutrition and meal replacements in which protein is the common denominator—are outpacing the growth of the conventional food industry. Meanwhile, the human microbiome project, a project of the U.S. National Institutes of Health, "aims to characterize the microbial communities found

FEMA Launches New Consumer-facing Website

The **Flavor and Extract Manufacturers Association (FEMA)** has launched a new website, www.flavorfacts.org, which is a consumer-oriented resource for information about flavors, flavor ingredients and their safety. The website also explains the FEMA Expert Panel, as well as the generally recognized as safe (GRAS) designation, while offering flavor news updates and a submission form for questions.

^aG-E Séralini, E Clair, R Mesnage, S Gress, N Defarge, M Malatesta, D Hemequin and J Spiroux de Vendômois. Long term toxicity of a Roundup herbicide and a Roundup-tolerant genetically modified maize. *Food and Chemical Toxicology*, 50(11), 4221–4231 (2012)

FEMA Presents 2012 Excellence in Flavor Science Award

The **Flavor and Extract Manufacturers Association (FEMA)** presented its 2012 Excellence in Flavor Science Award to **Chi-Tang Ho** of Rutgers University at its Fall Symposium.

FEMA's science advisor, **Timothy Adams**, introduced Ho to Symposium attendees. "This means a lot to me," Ho said during his presentation. "Because it means I was recognized by the flavor industry, and my work is important for the flavor industry."

Ho has devoted his career to flavor science as a professor. Since the 1970s, he has been recognized domestically and internationally for his work in furthering our understanding of the chemical reactions between amino acids, peptides and proteins with simple carbohydrates known as the Maillard reactions. He has written more than 140 book chapters and more than 200 publications in scientific journals, many of which are related to the chemistry of flavors and the mechanisms by which they form.

The Excellence in Flavor Science Award was established in 2006 and recognizes a globally respected researcher from academia or industry who has shown a clear dedication to advancing flavor science through original, peer-reviewed research.



Chi-Tang Ho (Rutgers University), left, and Timothy Adams, science advisor to FEMA.

at several different sites on the human body, including nasal passages, oral cavities, skin, gastrointestinal tract and urogenital tract, and to analyze the role of these microbes in human health and disease," offers new avenues of supplement development for gut and brain health and anti-inflammatory activity.

Meanwhile, Brush identified an ongoing trend for naturally functional/inherently functional foods—foods that are "healthy" from the start and don't require processing. Examples include ancient grains such as spelt, quinoa and amaranth. At the same time, lifestyle diets, particularly gluten-free and vegan, are moving past their core/intended audience and are now adopted by mainstream consumers as a means of eating healthy. Other key trends include:

- Natural pet food, benefiting from the increasing "humanization" of pets.
- Topical/ingestible nutribeauty—"beauty from within."
- Whole food supplements/food concentrates (currently an ~\$800 million category).

- Brain health supplements to address cognitive decline, mood, insomnia and anxiety.

A key impediment in this arena is the Dietary Supplement Health and Education Act, the regulatory framework through which supplements are regulated by the U.S. Food and Drug Administration. Brush observed that increasingly strong supplement claims have positioned such products more like medicine than food. Changes to how these products are assessed could be forthcoming. Finally, he said that industry must be aware that consumers harbor a great aversion to food science. As Brush told *P&F* in a September 2012 interview, such concerns point to a broader dichotomy that, "boils down to a nature-science thing," pitting scientific progress against consumer anxiety: "Food science is becoming a greater and greater obstacle," he said.

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