

2018 PROTEIN TRENDS & TECHNOLOGIES SEMINAR

SUMMARY: BUSINESS STRATEGIES

What's Inside on Proteins...

- Diverse Drivers of Protein Demand
- Global Sports Nutrition Market
- Marketing High Value Protein Ingredients
- Entrepreneur Panel: Developing “Challenger Brands”
- Food Industry Solutions for e-Commerce Issues
- Clean Meat Alternatives via Cellular Technology

Note: This digital magazine, initially posted at <https://GlobalFoodForums.com>, is now at <https://foodtrendstech.com/global-food-forums-magazines/>

 A GLOBAL FOOD FORUMS, INC. EVENT

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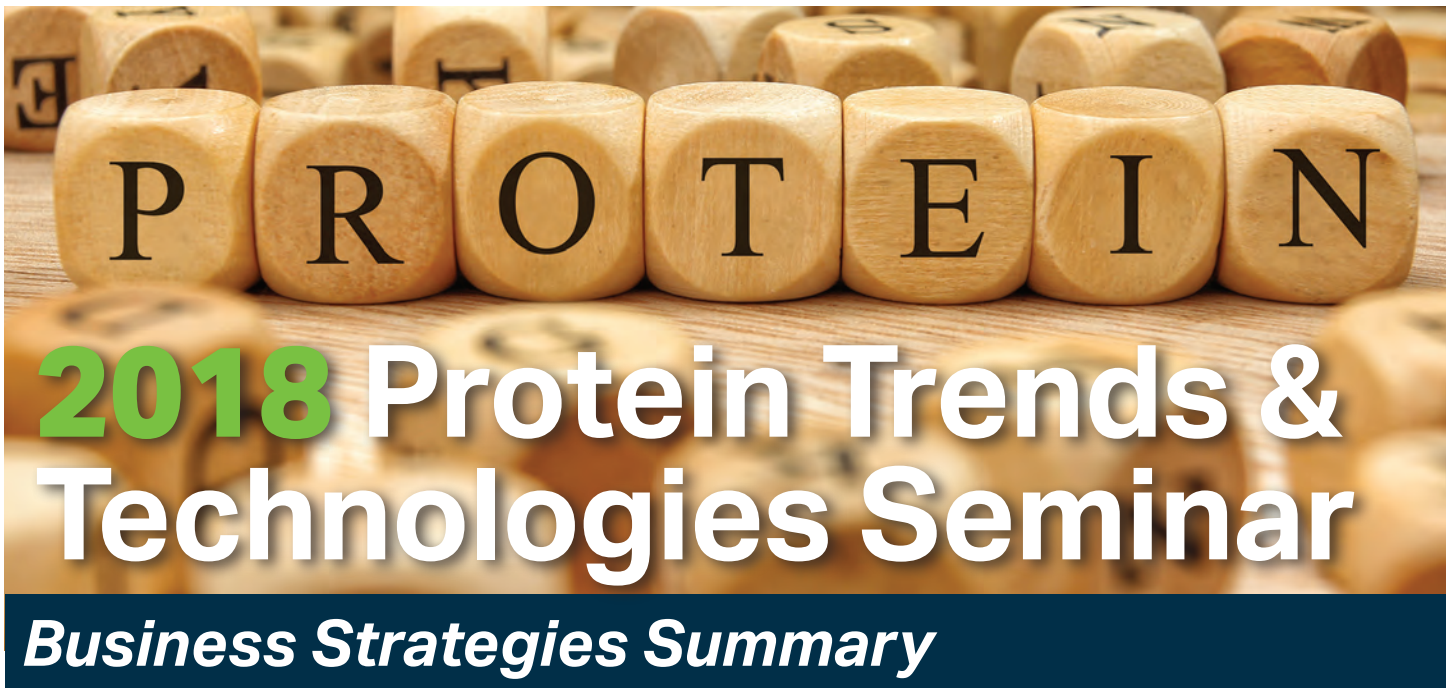
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2018 Protein Trends & Technologies Seminar

Business Strategies Summary

GLOBAL FOOD FORUMS, INC.'S 6th annual Protein Trends & Technologies Seminar was held in Itasca, Ill., USA. Its Pre-conference: Business Strategies program took place on May 22nd, 2018, and the Technical Program: Formulating with Proteins on May 23rd.

The Pre-conference's goal was to provide information for upper-level managers to help them identify opportunities and threats in the protein ingredient marketplace. Speaker highlights into consumer and product trends, market volatility, global regulations and emerging market opportunities, among other topics, are offered here.

Digital versions of post-conference summaries for both the Business Strategies session and Formulating with Proteins, plus PDFs of PowerPoint presentations, can be downloaded from www.globalfoodforums.com/store/protein-seminars/.



Information on past and future events can be found at www.globalfoodforums.com/proteinseminar

Diverse Drivers of Protein Demand Pose Marketing Challenges

ACROSS THE GLOBE, but especially in America, the drive to add more animal and plant protein to human diets continues unabated, even as consumers remain somewhat vague as to their reasons why. In his presentation titled "Consumer Trends in Protein; What is the Real Marketing Opportunity," Steve French, MBA, Managing Director, NMI, raised some interesting concerns. For example, French stated: "We can't rely upon the status quo to feed a global population that will reach 10 billion by the year 2050. We need to make changes that are better not just for human health, but also the health of the planet."

That said, he let the sometimes counter-intuitive numbers tell their tale.

While only 14% of the U.S. population feels deficient in protein, 43% of consumers seek more protein in their diet, said French. In 2017, 59% of consumers said that they actively sought out foods high in protein, a 51% increase over 11 years. "It's hard to find any other market growth trend as high as this." The reasons why vary.

"The primary reason that consumers cite for adding protein to their diet is all about having energy...having less fatigue, getting out of bed and being more competitive. The secondary reasons are managing weight and maintaining muscle mass."

French noted that all of these reasons track well with aging population trends. Interestingly, 69% of consumers also cite "a healthy mind" as a primary driver. These drivers are especially trending in Asia, where the focus is both on healthy cognition and cosmetics...i.e., mitigating the physical signs of aging.

“Protein benefit perceptions vary by age, so it is important to know one’s target consumer segment, in terms of understanding the benefits that resonate the most,” continued French. For Millennials, it is about building muscle, while for (especially female) Boomers, it is about increasing bone density and perceived cosmetic benefits.

French referred to NMI’s breakdown of consumer segments by their appetites for innovation:

- The Well Beings (26% of consumers) represent the proactive trendsetters.
- The Food Actives (14%) are mainstream, healthy consumers that seek self-directed balance in all things.
- The Magic Bullet group (20%) exhibits lower commitments to healthy lifestyles, preferring quick fixes instead. This is also the least healthy group.
- Fence Sitters (23%) are more “wannabee” healthy consumers looking for quick and easy solutions. This is unsurprising, as many are raising families.
- The Eat, Drink and Be Merry consumers (17%) may not be “healthy active,” but that doesn’t mean they aren’t healthy.

While Well Beings may be the more obvious group to pursue, French suggests that Fence Sitters offer a secondary target, as measured by consumers that continue to use high-protein foods and those consuming plant proteins over the course of a year.

But, it is important to remember that protein is not the only driver in consumer food and beverage choices. “Traditionally, the four main drivers have been taste followed by price/value, nutritional value and convenience,” he observed. That said, “this year is the first year that we saw nutritional value rise to the number two position of drivers.”

In terms of what types of proteins consumers prefer, only 7% of consumers believe plant-based products represent the “best source” of protein, whereas animal protein still rules, with 50% support. The prevailing consumer sentiment is that animal proteins provide essential nutrients not present in plant sources. Nonetheless, French spots countervailing trends that should provide opportunities for plant protein-based foods and beverages. “There is a groundswell in the U.S and other parts of the world against the use of hormones and antibiotics in foods...41% of consumers that we surveyed responded that they believe plant-based proteins are more environmentally friendly than meat.”

ADDITIONAL RESOURCES



2019 and 2020. The Annual Clean Label Conference is the industry’s only product development event dedicated to providing practical, impartial, “how-to” formulation advice to R&D and applied food scientists striving to create simplified ingredient labels. For upcoming dates, see <https://www.globalfoodforums.com/clean-label-conferences>.

7th Annual Protein Trends & Technology Seminar (May 21-22, 2019, Itasca, Ill., USA) will have world-class speakers providing protein ingredient marketplace insights during its May 21st Pre-conference: Business Strategies. Valuable technical advice, emerging ingredient technologies, consumer trend and other critical information will be offered at its May 22nd Technical Program: Formulating with Proteins. <https://www.globalfoodforums.com/2019-protein-seminar>.

Global Food Forums & Social Medias

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The Global Food Forums’ Library!

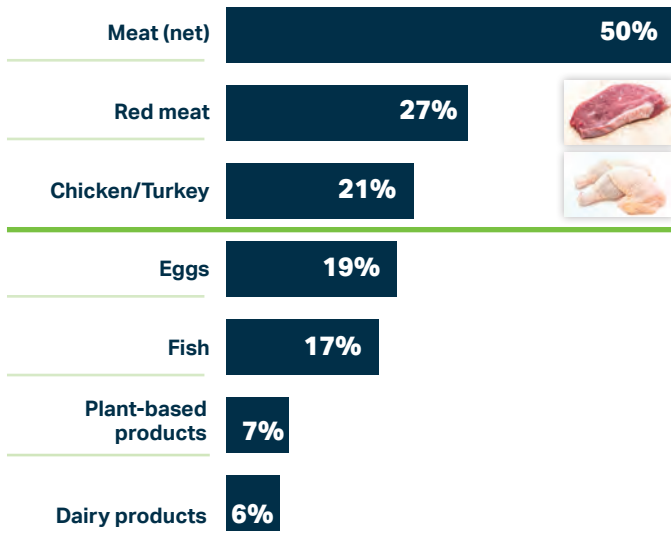
Global Food Forums first events launched in 2013. Download complimentary presentations and post-conference summaries of past conferences at www.globalfoodforums.com/store.

Regulatory Food News Bite

The FDA began work on its comprehensive Nutrition Innovation Policy by holding a public meeting July 26, 2018, prompted, in part, by the growing emphasis consumers have placed on the importance of macronutrients, such as protein, as well as micronutrients on health and wellness. Key areas of focus include modernizing health claims and ingredient labels; modernizing Standards of Identity; implementing new nutrition facts and menu labeling among others. A comment period followed the public meeting but expired on October 11, 2018. For more information, see <https://bit.ly/2pTvevP>.

% Consumers Rating Best Source of Protein

Despite the current interest in plant protein, consumers still overwhelmingly rate meat products as the best source of proteins.



SOURCE: NMI/2018 PROTEIN TRENDS & TECHNOLOGIES SEMINAR

Thus, he concluded, consumers will continue to integrate animal and plant proteins into their diets and lifestyles—even as the U.S. protein market, at least, shows signs of maturing.

“Consumer Trends in Protein; What is the Real Marketing Opportunity?”, Steve French, MBA, Managing Director, NMI

A Global Perspective on the Sports Nutrition Market

PROTEIN POWDER REMAINS the undisputed top contender in the global sports nutrition category, affirmed Carolina Ordonez, MBA, Senior Consumer Health Analyst, Euromonitor International (affiliation during seminar). In her presentation “Global Trends, Drivers and Prospects in the Sports Nutrition Market,” Ordonez provided insights into the how and why this continues to be...and why the industry should pay particular attention to the rise of category micro-influencers.

“Eighty-two percent of the global sports nutrition category today is represented by protein products,” said Ordonez. It is also growing at the fastest rate found within the broader consumer health products industry. “This category was valued at \$13.6 billion globally in 2017 and is expected to grow at a 6.8% annualized rate between 2017-2022. This surge is also reflected in sports nutrition-product e-commerce

sales, which grew at an 18% annualized rate between 2012-2017, to reach \$3.2 billion in the U.S. by 2017.”

Globally, sports protein powders generated \$11.2 billion in sales in 2017. Ordonez predicted that they would experience 7.1% annualized growth over the next five years.

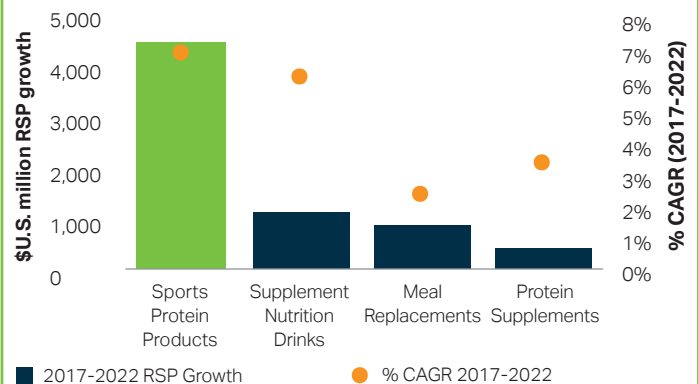
For now, U.S. sales in toto represent about 62% of the global sports nutrition market, but Asia-Pacific sales are also surging, especially in Japan, China and India, said Ordonez. And, “don’t overlook Latin America,” she counseled. Though sales volumes (\$1.0 billion in 2017) remain relatively modest, Latin America represents a prime U.S. protein supplement export destination, due to their perceived high quality.

Ordonez noted that consumer drivers behind sports protein consumption are changing. “It’s not that people don’t want to lose weight anymore, but they do want to use fitness and weight management strategies to get there. They no longer believe in magic pills.” Thus, she notes a gradual shift in focus from pure athletics to a more broad-based approach to lifestyle issues, perhaps reflective of an aging population demographic.

In the U.S., the sports nutrition protein category switched from being dominated by bodybuilders to people who chose sports nutrition for a variety of health, weight or lifestyle reasons, noted Ordonez. While the number of older people consuming protein powders to avoid sarcopenia, or a loss in muscle tissue, has increased, the number of younger consumers influenced by vegan, vegetarian and flexitarian practices has also grown. This has been driving growth in plant-based protein sales.

Ordonez recalled a conversation with Geoff Palmer, Chief Executive of Clean Machine (Pompano Beach, Fla.), a company that sells vegan supplements online. Palmer is a 55-year-old, self-styled vegan bodybuilder. In 2017, Palmer’s company introduced a protein powder consisting of pea protein blended with “water lentils” (duckweed). He

Value Sales of Protein Based Products in Consumer Health 2017-2022



Sports protein products are projected to continue dominating total protein-product sales in the “Consumer Health” category at an anticipated 7% compound annual growth rate (CAGR) between 2017-2022. This equates to \$4.5 billion in retail sales growth (as measured by retail sales price, or RSP).

SOURCE: EUROMONITOR INTERNATIONAL/2018 PROTEIN TRENDS & TECHNOLOGIES SEMINAR

claimed the product quickly developed a “huge following” among vegan bodybuilders.

Also, Ordonez believes the emerging Generation-Z (also known as iGen –ed) merits a closer look. She estimates that vegetarian, vegan and flexitarian trends will grow under their influence. This emerging generation of consumers is a heavy follower of micro influencers.

What is a micro-influencer? Whereas traditional market research focuses on fitness or lifestyle demographics, “We need to consider how human beings associate to form crowd or tribal cultures that help define our social, fitness and health practices,” explained Ordonez. It’s that influence that defines a micro-influencer. She cited the examples of Josh and Sarah Bowmar, an online fitness training and nutrition advice-giving couple who developed an online presence that now claims about one million followers. “In one trade show I attended, the longest and slowest line that I observed was at the Bowmar’s booth. The Bowmars saw an opportunity to launch their own sports nutrition company, following the success of their website [www.bowmarfitness.com].”

The next evolution of online marketing will involve close coordination between online suppliers of protein products and such micro-influencers, according to Ordonez. There are plenty more people out there, like the Bowmars, for every fitness and nutrition “tribe” imaginable, she concluded.

“Global Trends, Drivers and Prospects in the Sports Nutrition Market,” Carolina Ordonez, Senior Consumer Health Analyst, Euromonitor International (affiliation during seminar)

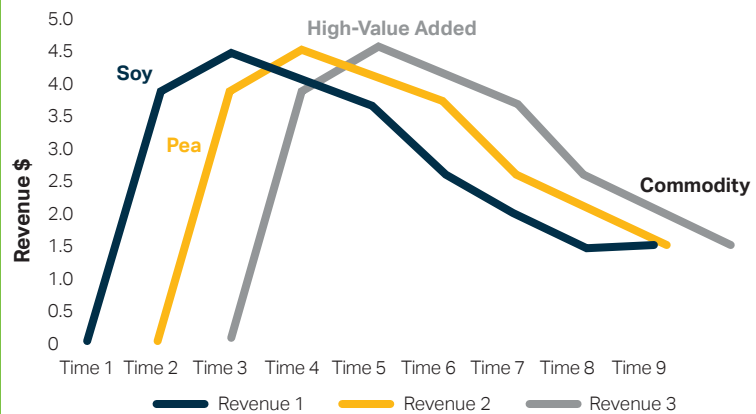
Business Strategies for High-Value Protein Ingredients

AS TECHNOLOGY PIPELINES continue to pump new plant and animal protein options into food and beverage domains, it is critical that marketers learn to develop strong, compelling and clearly understandable narratives to properly explain these emergent technologies to consumers. So argued David Lafond, Ph.D., MBA, Principal, Lafond Food Technology, LLC, in his presentation “Emerging Protein Ingredient Technologies for Business Development.”

Nettle protein, engineered yeasts and meat cell cultures, you say? Read on.

“Consumers want healthy ingredients,” began Lafond. “They look for the absence of negatives and the presence of positives. They also look for recognizable ingredients and clean labels...they want to understand what these ingredients represent and why they are in their foods.”

Plant Protein Revenue Curve



❗ **Protein suppliers need to identify a pipeline of ingredients to sustain the high-value portion of the revenue curve, as ingredients move toward the commodity region.**

SOURCE: DAVID LAFOND, LAFOND FOOD TECHNOLOGIES/2018 PROTEIN TRENDS & TECHNOLOGIES SEMINAR

Time is of the essence when introducing new technologies, as start-up economics eventually yield to commodity economics. Success eventually transforms high-value specialty ingredients to low-value commodities, as more suppliers enter the same space. Consequently, suppliers should always be looking ahead to identify the next high-value protein spaces, said Lafond.

“Suppliers tend to focus too much attention on protein content and agronomics...the cost of growing and extracting protein...when determining what proteins to invest in for the future. I suggest that there are other factors to consider as well,” Lafond added. “We need to ask what compelling messages we can provide about these proteins?”

Nutritional messages are one, but they need to be supported by clinical data, which can be prohibitively expensive. There are also regulatory constraints on what can be said using clinical data. On the other hand, ancient grains, such as quinoa and teff, have succeeded in large part because their rich and compelling histories have added to their mystique.

Such captivating narratives provide opportunities for companies to build relationships with their consumers through social media. Lafond cited a company—One Degree Organic Foods—that put QR codes on its products to link consumers to videos and other displays about the farms that produced each of the ingredients in the company’s products.

“Another area rich in narratives is ethnobotany,” Lafond said, citing the histories of Chinese and Indian Ayurvedic medicine. Native American plant medicines have not been as well-documented yet and may provide unique opportunities.

Recently, Lafond and ethnobotanists at the University of Kansas screened 50 Native American plants for food and nutritional values, based on historical use data. They determined that nettle leaves had the highest protein content of the plants surveyed—37% on a dry-weight basis (vs. peanuts at 24% or quinoa at 14%)—together with a 41% dietary fiber content. They were used by a number of Native American tribes and come with “a unique, not unpleasant flavor,” said

Lafond. “This is a narrative waiting to be developed.”

Lafond also expects great things to emerge from fermentation technologies. Fermentation is highly sustainable and leaves a negative carbon footprint. “Algae can produce very high protein contents with balanced amino acid profiles.”

“If you haven’t heard of CRISPR-cas9, you will,” claimed Lafond. It is a breakthrough genetic modification technique that allows researchers to “cut and paste” very specific gene sequences into the genomes of yeast or algae. For example, yeast has been modified to grow animal proteins as “clean meat” alternatives. “With this technology, we can modify yeast to produce milk or eggs without cows or chickens,” announced Lafond. One company is already making a beef burger analog using this technology. Another company is making “fish without fish.”

“It is still very early, but one start-up company in San Francisco, one in Europe and possibly one in Canada are marketing protein ingredient systems designed by computer algorithms using AI and large datasets to match protein composition and structure to end-use functionality,” stated Lafond. “I’ve seen an egg substitute made from mung bean protein using this predictive model. It is pretty amazing.”

Exciting as they may be, “ultimately, the key to the success or failure of these technologies will depend upon how well we manage the narratives in ways to which consumers can relate,” concluded Lafond.

*“Emerging Protein Ingredient Technologies for Business Development.”
David Lafond, Ph.D., MBA, Principal, Lafond Food Technology, LLC*

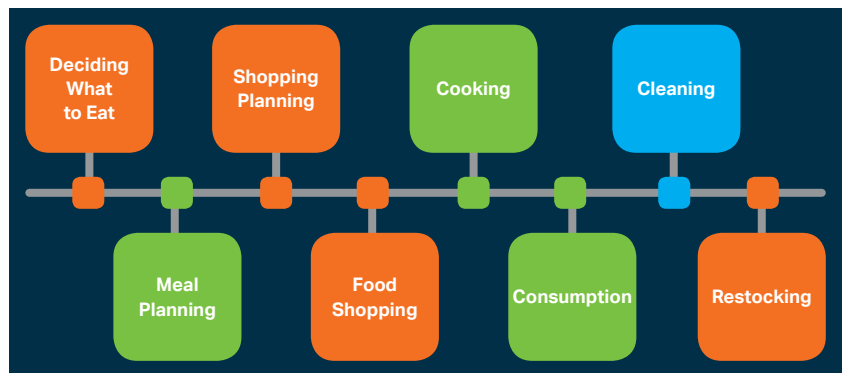
Food Industry Solutions for Transition to E-commerce

WILL E-COMMERCE EVENTUALLY dominate food sales and, if so, what are brick-and-mortar food and beverage companies to do? Darren Seifer, Executive Director, Industry Analyst-Food Consumption, NPD Group, addressed these questions in helpful detail in his presentation titled “Food & Beverages Migration to E-commerce: The Tipping Point is Here.”

“We are now at the tipping point,” argued Seifer, noting Amazon’s acquisition of Whole Foods immediately turned it into a major player in the food category, forcing box stores, such as Walmart and Target, to try and catch up.

“All retailers and their supplier partners should collaborate and rethink what will happen within their box,” said Seifer, noting that there are important lessons to be learned from other categories’ e-commerce experiences.

E-Commerce Solutions to Food & Beverage Consumption



Whereas the focus of “brick-and-mortar” sales is on tangible products, e-commerce offers retailers opportunities to provide service solutions all along the food and beverage decision, purchase and consumption processes.

SOURCE: NPD GROUP, INC.®

Lesson one is that food and beverage companies need to expand their thinking in terms of offering solutions to consumers. Lesson two is that companies need to rethink just what “category leadership” means in the world of electronic commerce. Lesson three is that “brick-and-mortar stores are and will remain very important, but they will need to change quickly in order to survive,” said Seifer.

Even as total U.S. retail sales dipped slightly, Seifer said, growing e-commerce transactions captured about 7.7% of those sales in 2017. The food and beverage industry is only at the very beginning stages of transitioning to e-commerce, he continued. The food and beverage category today captures only 4% of its sales online, as compared to technology products (at 30%). In the middle of the range are prestige beauty products (14%)...what beauty products share with foods and beverages is that they, too, are products that consumers want to see, smell and otherwise test out before purchase.

People go online to find solutions, so “companies need to make sure their products are perceived as part of the ‘dinner’ solutions that people seek.” Seifer divided these into eight steps, starting with “deciding what to eat” and finishing with “cleaning” and “restocking.” Added Seifer: “Each presents their own e-commerce service opportunities.” For example:

- Carry it for me! Many consumers may buy some products in quantity, but they don’t want to carry large, bulky items home with them. Online delivery services provide a solution.
- Unpack it for me! Some providers, such as Amazon and Walmart, are experimenting with having consumers provide home access to their service providers, whereby they can directly stock pantries, refrigerators and freezers.
- Restock it for me! For certain products (e.g., pet food), companies can anticipate purchase cycles and provide direct-door delivery on a schedule.

However, there are barriers to be overcome, the biggest being that “consumers still want to pick out their own fresh items and they would rather not pay delivery fees,” said Seifer. He noted that bene-

fits of direct store shopping include “reminding consumers of other things they need,” and that it is often “faster to drive to a store and obtain products as needed.” It is also true that “impulse buys” and “brand attachments” tend to plummet when consumers shop online, he added. E-commerce companies have tried using pop-ups and other tools to try to spur impulse buys.

E-commerce engenders other supplier opportunities. For example, whereas retail package designs are conceived so that they visually dominate crowded retail shelves, this is less important for online product sales. Retailers can thus design lower-cost packages to better fit in crowded consumer pantries, for example.

While online sales may render it more difficult to capture impulse buyers, it is a good place for replenishment buying, especially for “high-loyalty” brands, said Seifer. “Once consumers pick their site, they tend to stick with it.”

“Brick-and-mortar stores are not going away,” concluded Seifer, but if food and beverage retailers don’t heed the lessons learned from other industries’ shifts to e-commerce, they put their very survival at risk.

“Food & Beverages Migration to E-commerce: The Tipping Point is Here,” Darren Seifer, Executive Director, Industry Analyst-Food Consumption, NPD Group

Cellular Technology Opens the Pathway for Clean Meat Alternatives

FOOD COMPANIES are now looking beyond traditional meat alternatives into the futuristic realm of cellular technology, and for good reason. Some consumers desire more healthful diets; others are concerned about the environment or food security for a growing population. Still others see animal welfare as an area of focus.

Three of the four primary measures for total environmental impact (not only greenhouse gas emissions) are 70-90% lower for meats produced via this new technology than through animal agriculture. These include total land and water use and localized pollution of soil and water.

Energy, the fourth measure, is comparable to that of chicken farming and production, which is the most efficient form of animal agriculture, noted Brad Barbera, Director of Innovation, The Good Food Institute, in his presentation titled “Animal Protein Minus the Animal: The Rise of Cellular Technology.”

Consumers’ desire for more healthful products increases the demand for cleaner foods, which in turn draws consumers away from animals treated with antibiotics, due to health concerns. “A full 80% of the antibiotics used in the U.S. go into animal feed, not treating human illness,” said Barbera. The rest of the world has similar practices. Why? Factory farm conditions require massive use of antibiotics to prevent outbreaks of disease among the tightly confined animals, he explained.



SOURCE: ISRAEL21C/ISSUM: PHOTOGRAPHER

🌱 **Future Meat Technologies’ first cultured chicken kebab on grilled eggplant and tahini sauce at Jerusalem’s Machneyuda restaurant.**

In addition, there is no efficient method of funneling calories through a live animal to produce consumable food calories for humans, Barbera added. Most of the calories fed to animals go into their growth and metabolism, not into producing meat. This results in waste and inefficiency. For all these reasons and more, companies and their food scientists and bioengineers are turning to cellular agriculture.

Between plant-based agriculture alternatives and animal-based alternatives, where does cellular agriculture fit in? As it turns out, there’s a spectrum of alternatives, ranging from pure plant-based offerings to hybrids of both protein sources to recombinant DNA (rDNA) and, finally, to cellular technology used to produce clean meat, clean fat and clean gelatin (and even non-food products, such as clean leather).

Ultimately, the goal of cellular agriculture in producing clean meat is to produce the same taste, aroma, texture and bite of animal meat, only produced without the animal. The method of doing so involves the creation of three different types of cells and combining them onto a matrix. Those cells include the protein source—the myocytes, or muscle cells; the adipocytes, or fat cells; and the fibroblasts and chondrocytes—the connective tissue that give the meat its texture, consistency and bite.

Clean meat production includes four major areas: cell lines, cell culture media, scaffolding and structuring, and bioreactors (the vessels used for production). Any one of these areas holds tremendous opportunities for investment, although the most significant opportunity for investment may be in cell culture media, noted Barbara. Cell culture media have been primarily developed for pharmaceutical-grade products, not necessarily food grade; the group that brings those costs down will be in high demand, he offered.

At the beginning of the process, a small biopsy of tissue, about the size of a grain of rice, is extracted from an animal. The cell culture media enables the cell to grow and proliferate. Cells are then deposit-

ed on a matrix called scaffolding, where complex 3D structures form, and cells differentiate. This is a new area where a variety of possibilities are being explored, such as 3D printing. “If you can imagine 3D printing with living tissue,” said Barbera, “that is the type of research in process.”

While plant proteins are a viable option, cellular agriculture will soon be a reality. The technology is one being explored globally. There’s a significant cluster in Silicon Valley in the U.S.—an area normally associated with digital technology. The Netherlands and Israel are other areas where start-ups are popping up, as is Asia, particularly Japan. The Good Food Institutes’ role in cellular agriculture is to make sure all organizations working on this technology have the best scientific and business knowledge necessary to support their growth, and to make this technology become a reality as soon as possible.

The next challenge may well be implementing policy that regulatory, food-industry associations and food manufacturers can live with. “Change is always hard on some in society. We’re looking for an easy and smooth transition,” Barbera concluded.

*“Animal Protein Minus the Animal: The Rise of Cellular Technologies,”
Brad Barbera, MBA, Director of Innovation, The Good Food Institute*

Innovative Challenger Brands Panel

THE FOOD AND BEVERAGE INDUSTRIES today enjoy a historical confluence of rapidly shifting consumer trends and low barriers to entrepreneurship, generating a flood of innovation. To explore the motivations as well as technical and business challenges of entry-level food and beverage entrepreneurship, Global Food Forums convened a panel of entrepreneurs to share their insights and experiences. The panel was moderated by Kara Nielsen, Vice President of Trends and Marketing, CCD Innovation, an Emeryville, Calif.-based food and beverage innovation consultancy.

Panel participants included:

- Miyoko Schinner, CEO and Founder, Miyoko’s Kitchen, a Petaluma, Calif.-based manufacturer of vegan dairy cheese alternatives.
- Dariush Ajami, Ph.D., Vice President, Research & Development, Beyond Meat, an El Segundo, Calif.-based manufacturer of vegetarian meat alternatives.
- Kurt Seidensticker, CEO and Founder of Vital Proteins, Elk Grove, Ill., a manufacturer of hydrolyzed collagen products for joint health.
- Natalie Shmulik, M.L.A., CEO, The Hatchery Chicago, a business incubator focused on food and beverage start-ups.

Nielsen opened the panel by describing her own company’s focus on developing “challenger brands”—the focus of the panel and a term

that reflects how many emerging companies are challenging the status quo in food manufacturing. “When we look at challenger brands, we need to ask what it is that we are challenging and why. Consumers have changed and, consequently, their needs have changed. So, when thinking about the trends these new brands are driving, we are talking not only about changing consumers, but also about their evolving values.”

Nielsen then asked panelists what motivated their entrepreneurial ventures.

Entrepreneurial Motivation

For Miyoko’s Kitchen’s, Schinner, a vegan for 30 years, it was an opportunity to change the world. “I have a deep respect for all species to live on this planet as they wish to live, not as commodities for us,” she began. “To be healthy, we need to think about the health of the planet and the health of animals...and create a world that supports all life forms.” But, she emphasized, “we also need to appeal to people’s taste buds, to make people think, ‘if I like products like this, I could go vegan.’”

Ajami, Beyond Meat, said that his company’s goal is to engineer a global shift from animal to plant-based meat. “We believe we can perfectly replicate animal muscle protein with plant protein.” He argued that, ultimately, the animal protein industry is not sustainable.

Seidensticker, Vital Proteins, was motivated to create his company five years ago as the result of sports-related joint injuries. “Humans are creatures of motion and flexibility,” he said, and that means they need to create collagen for joints and other connective tissue. His research suggested that humans synthesize insufficient quantities of the essential amino acids required to meet their collagen maintenance needs. He also found that collagen supplementation helped his joint recovery after running. Thus, he launched his company on the value proposition of health, wellness and functional benefits of hydrolyzed collagen.

For Shmulik, The Hatchery Chicago, motivation in her work was to, in turn, help entrepreneurs succeed. The Hatchery currently occupies a 400,000sq ft (37,200sq m) facility that Shmulik expects will eventually house 75-100 entrepreneurs, along with manufacturing, packaging, training and support resources. She also added, “Our social mission is to serve one of the most underserved communities in the nation with one of the highest unemployment rates.” Shmulik predicted that the Hatchery would create 900 new jobs within five years of inception.

Initial Hurdles

For Beyond Meat, said Ajami, the first major obstacle to overcome was a supply chain issue: to identify appropriate sources of protein, as defined by amino acid content, that were available in the amounts required.

For Miyoko’s Kitchen, the first major hurdle was manufacturing scale-up. She had started making artisanal vegan cheese at home but ran into problems with scaling up the ripening process. They initially built an aging room using galvanized steel but were forced to switch to stainless steel after rust problems developed.

For Seidensticker, it was about speed and persistence: “The quickest way to learn is to do and optimize something yourself.” Thus,

Vital Proteins, built its own manufacturing facility from day one and quickly constructed a vigorous online-sales and marketing presence to develop consumer awareness. Plus, he stated, “Anytime you create a new market category, you may have to go through three or four iterations before you get it right.” That requires time and money.

Shmulik listed the top hurdles she had observed in her work with entrepreneurs. First, she said, they need to do their market research up-front, in order to confirm that what they perceive to be a market opportunity really is a market opportunity. Financing is also a major challenge, as entrepreneurs almost always underestimate how much funding they will need at the outset. “We encourage our clients to build their first prototypes on the cheap and to get them in front of potential customers for feedback.” Third, they should investigate the legal and regulatory terrain in order to avoid making expensive, “brand-shaking” errors.

Nielsen asked Schinner to address the potential labeling issues of marketing non-dairy cheeses as “cheese,” as the U.S. dairy industry is required to label its products, including cheese, according to rigidly defined Federal Standards of Identity (SOI).

“Even though SOIs exist to prevent confusion in the marketplace, they don’t help determine what new, innovative products should be called,” said Schinner. “So, if you can’t call something a substitute for something else, this only further confuses consumers.” There is a lot of legislation and lobbying underway by the plant-foods industry to resolve these issues, she continued, but, until then, “we decided to put ‘cheese’ on our label.”

Sometimes, entrepreneurs need to be bold and willing to create their own market category, added Seidensticker. “At first, I didn’t think we could enter the protein category, as it was so crowded and dominated by dairy and plant proteins. So we decided that we would create a third category...functional protein.” He and his colleagues spent a lot of time testing their concept by talking to people at trade shows. “Trade shows gave us the opportunity to get in front of major influencers and perfect our message.”

Nielsen asked Shmulik how The Hatchery Chicago advises its clients to leverage resources. “We encourage our community of entrepreneurs to exchange resources, such as leads to distributors and outside manufacturers,” she responded. Being an entrepreneur can be very isolating, and “we spend a lot of time playing psychiatrist.” Also, many entrepreneurs become so excited and anxious to get their product out to retailers that they overlook the importance of negotiating favorable terms and developing long-term relationships with retailers, said Shmulik.

“One of the things that we did very successfully was to go first to consumers through online sales in order to build brand recognition,” said Seidensticker. As a result, Vital Proteins was able to immediately secure national distribution at Whole Foods based on its online presence and extensive consumer community. Ajami added that developing tight relationships early on with the supplier community is critically important. “We wanted to communicate to them that we were in it for the long-run, so that [our supplier community] would be there

when they were most needed.”

“Sometimes we come up with products on purpose, sometimes we don’t,” observed Schinner. Some new products are developed by sheer accident, but an active online interaction with consumers provides instant feedback on whether they represent real market opportunities or how they can be adjusted to better fit consumer expectations. Seidensticker confirmed: “Direct-to-consumer sales allow one to innovate more quickly and develop closer, interactive relationships with their customers. They send us suggestions that help us to better resonate with our customers.”

Also, consider cross-brand collaborations, offered Shmulik. She noted several such collaborations, such as online custom coffee roaster Stumptown Coffee’s (Portland, Ore.) collaboration with Taza Chocolate (Somerville, Mass.), an online, direct-trade chocolate manufacturer.

Some innovation opportunities become evident from simple walk-throughs of food and beverage stores. “If you walk into a butcher shop, you will see all the products that we seek to emulate,” explained Ajami, of Beyond Meat. The company has systematically expanded its original platform to include The Beyond Burger, Beyond Sausage, Beyond Breakfast Sausage and Beyond Chicken product offerings.

Authenticity and Transparency

Authenticity is the key to resonating with consumers, said Seidensticker. “When we first got into this space, there were collagen tablets in the market, but nobody knew what collagen was...it was perceived to be some type of pharmaceutical or chemical material. We had to explain that it was made from the remnants of already dead animals and that we only obtained our collagen from humanely raised animals. People could connect with that.” Vital Proteins’ website prominently features a video explanation of its collagen’s sustainable origins.

For Miyoko’s Kitchen, “whole foods” is the key. “We have an easy job, because all of our ingredients are organic-certified, clean label ingredients; the fermentation used for aging is a traditional process well-understood by consumers,” said Schinner. “Natural, whole foods are what we believe to be healthier, and they are also in line with consumer trends,” agreed Seidensticker.

Ajami concurred. “Our strategy is to be very transparent with consumers. Currently, we use a variety of proteins to ensure our products can not only meet, but in some circumstances exceed, the nutritional profile of their animal counterpart. We recognize that consumers are looking for cleaner labels, so we are constantly trying to come up with technical solutions to reduce the complexity of our ingredient lists. Focusing on simple, plant-based ingredients and building products without gluten, soy or GMOs, as we know consumers are increasingly uncomfortable with those ingredients, is a key guardrail that guides our innovation team and helps ensure a simpler label.”

Exit Strategies

Nielsen asked panelists how they viewed the role of large consumer packaged goods companies (CPGs) in food and beverage innovation, particularly with respect to mergers and acquisitions (M&A).

Moderator and Panelists



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CEO and Founder,
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Dariush Ajami

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Kurt Seidensticker

CEO and Founder,
Vital Proteins



Natalie Shmulik

CEO,
The Hatchery Chicago

“Gone are the days when consumers perceive big-brand acquisitions of start-ups as a problem,” maintained Shmulik. “When we speak with entrepreneurs, 99% have an exit strategy that envisions acquisition by a larger company, and we now see more entrepreneurs and CPGs embracing the concept of partnering.” Meanwhile, CPGs have been learning to let entrepreneurs keep doing what they do best without meddling in the process. “Such partnerships become especially beneficial if entrepreneurs can access the legal and regulatory resources of larger firms and learn what it takes to build and maintain a brand,” continued Shmulik. Many CPGs also offer access to venture capital.

Miyoko's Kitchen's Schinner noted, “You need to build a brand that you believe will attract investors whose values are aligned with your company's mission.” This point prompted Seidensticker to add: “But you don't build a brand to sell it; you build a brand about which you are passionate.”

Ajami noted that Tyson Foods, a leading American CPG company, has been a major investor in Beyond Meat. “It's nice to know that Tyson recognizes that the protein aisle is changing,” he said.

The People Factor

Growth brings challenges, especially with regard to people.

“As we get bigger, we want to make sure that we keep our start-up culture,” added Ajami. Three years ago, the company's employee count rose from 20 to 200, he noted. “We have to be very careful about our hires, as we want to make sure that they are passionate about the company's mission.” To which, Seidensticker added, “The danger is that the larger we get, the more we start behaving like a big CPG company.”

“Human resources (HR) becomes a huge challenge as we navigate companies from point A to B,” agreed Shmulik. “We offer HR services to our companies; getting the right talent for them is extremely challenging. Companies need to strike the right balances between hiring people straight out of school that are agile and enthusiastic, and hiring experienced people that know how to take a company to the next level.”

Keep it Simple

An audience member asked about the challenges of having to deal with people, whether customers or investors, that don't share the same vision as the entrepreneur.

Schinner replied that the underlying issue is the difficulty of explaining an entrepreneurial vision. “Ultimately, what you want is a self-explanatory product,” she noted. Shmulik agreed: “Sometimes success eludes innovators, because they spend too much time and resources trying to explain their vision or product to others...because it's their baby!” That can make it difficult for them to listen to the advice or feedback of others. Thus, Shmulik said she often found it necessary to find ways to convince entrepreneurs that any changes made were “their idea.”

“Our company's decision to call itself ‘Beyond Meat’ was actually quite clever,” noted Ajami, “because it is easy for consumers to understand.” It is also not a challenge to meat-eaters. “Our major target is carnivores, and our products are developed for that group.”

“Ultimately, it is the entrepreneur's responsibility to educate the market on their product's benefits,” concluded Seidensticker.

Keep it simple, in other words

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