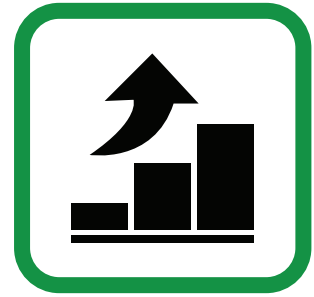


2014 PROTEIN TRENDS & TECHNOLOGIES SEMINAR

Highlights: Business Strategies



A Global Food Forums, Inc. Event

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2014 Protein Trends & Technologies Seminar: *Business Strategies Highlights*

Global Food Forums, Inc.'s second annual *Protein Trends & Technologies Seminar* was held April 8-9, 2014, in Arlington Heights, Ill., USA. This year's seminar featured a new Pre-conference: Business Strategies held on April 8th, which provided a distinctly different and uniquely valuable program. The focus of the Pre-conference was on fundamental, but ever-changing, factors impacting the global protein ingredient market. The information was designed to be crucial for upper-level managers responsible for helping to guide their company's protein ingredient business and for those for whom the protein ingredient marketplace has significant impact on their operations.

The Business Strategies program was very well received by the 176 upper-management attendees. Experts covered many

critical market factors, including: Market Volatility, Consumer Trends, Global Regulations, Analysis and Forecasts for Value-Added Protein Ingredients, the Latin American Market, Global Revenue and Expected Growth, among others. This special report offers brief highlights, in the form of key points and charts, on the information presented by the Pre-conference's seven speakers.

The Business Strategies program was the perfect complement to the next day's Technical Program: Formulating with Proteins, which had 225 attendees. The 2014 Protein Trends & Technologies Seminar's Technology Program: Formulating with Proteins Report, its Business Strategies Highlights and the speakers' PowerPoint presentations may be downloaded from www.GlobalFoodForums.com/2014-protein-seminar/store.

Table of Contents

(By presentation title, speaker and key charts)

The Rise of Protein in the Global Health & Wellness and Supplement Arenas

Chris Schmidt, Consumer Health Analyst, Euromonitor International

- Protein Supplement Sales by Market, 2008-2018
- What Ingredients Do You Look For on Food Labels?

Opportunities & Headwinds in Global Ingredient Regulations

Carolyn Fisher, Ph.D., Senior Scientist, Decernis

Soy & Dairy Market Volatility: Its Impact on Protein Prices & Strategies for Managing Financial Risk

Robert Joyce, MBA, Commercial Commodity Consultant, Stewart-Peterson Inc.

- Market Scenario Planning: By the Numbers

So Many Proteins, So Little Time...How to Choose?

Daniel Best, MSc, MBA, President, Best Vantage, Inc.

- Raw Protein Price Trends

Size, Share, Sources & Segments: Analysis and Forecasts for Value-Added Protein Ingredient

Christopher Shanahan, MSc, Global Program Manager—Food, Ingredients & Feed, Frost & Sullivan

- Protein Ingredients: Global Revenue & Expected Growth
- Total Protein & Amino Acids Market Revenue by Category

Protein Trends & Technologies: Consumer Protein Perceptions & Needs

Sue Fennelly, MBA, Director of Business Development, Food & Beverage Services, NPD Group

- Consumer Survey: Which Foods Are the Best Sources of Protein?
- Consumer Segments in Protein

The Creatine Cartel: The Good, Bad, and Ugly of the Sports Nutrition Market in Latin America

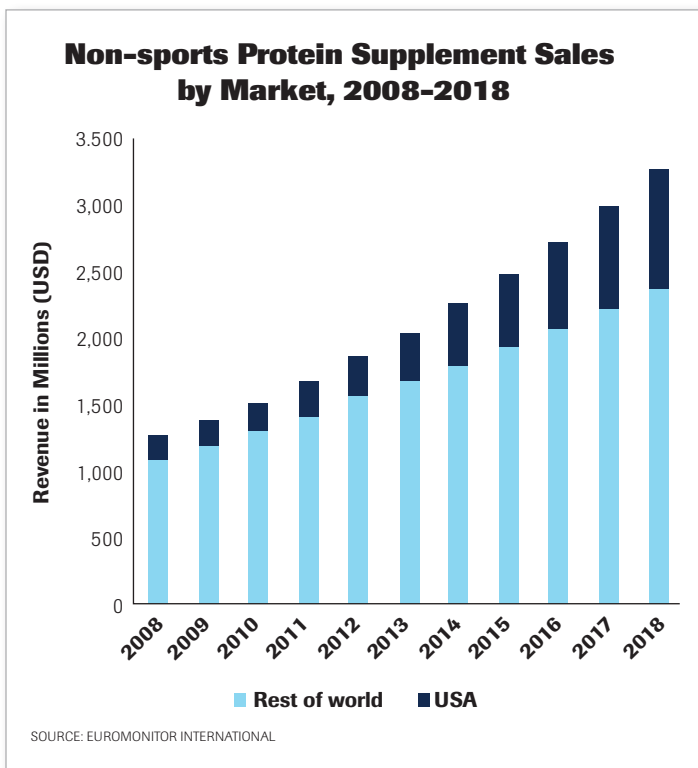
Kit Sanderson, CEO of Spanish Fitness Media LLC, and Editor of *Muscular Development Latino*

The Rise of Protein in the Global Health and Wellness, and Supplement Arenas

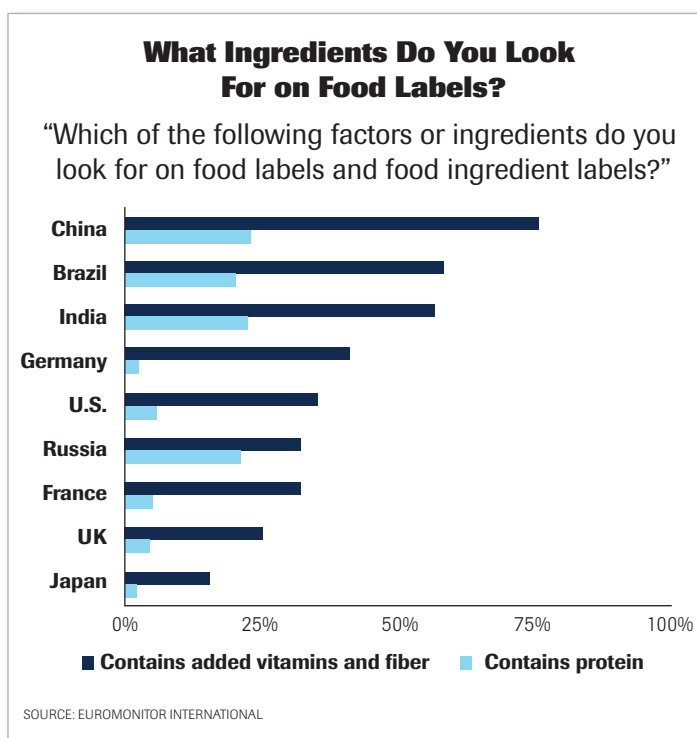
The future landscape of protein will hinge on segmentation and education, according to market research by Euromonitor International, and success will depend on how well companies know their customers and inform them of product benefits. As far as age is concerned, Euromonitor has found that protein has the highest appeal among Millennial consumers, likely due to the fitness and brand-consciousness trends.

“We’re also noticing a protein concern life-cycle,” said Chris Schmidt, Consumer Health Analyst at Euromonitor International. It peaks with younger consumers; ebbs some in the family-raising stage; and again grows slightly as consumers age and become more concerned with bone health and muscle-maintenance issues.”

There are differences along gender lines, as well. Men look to protein for muscle mass, bone health and exercise recovery, while women look for lean muscle maintenance, skin/hair health, bone health and satiety. Aging is an area to potentially



■ Protein accounts for a mere USD 2 billion piece of the massive USD 84 billion vitamin and dietary supplement (VDS) industry. That said, protein supplements are among the fastest growing items in the VDS category and are becoming especially innovative with formulations. Sales of these supplements have been on a steady rise that research says will continue, in the U.S. as well as worldwide, into 2018 and beyond. The review period was 2008-2013, with 2013 results based on part-year estimates, and they forecasted 2014-2018.



■ While protein has a healthy positioning in most markets, it tends to trail other nutrient claims, such as added vitamins and fiber. While protein tracks better with consumers in emerging markets, these results in general demonstrate the need to better communicate the benefits of protein to consumers. The survey asked 16,327 customers from around the globe, and respondents were allowed to select multiple factors.

capitalize on, Schmidt added, since proteins have benefits with heart health, maintaining muscle/bone health and skin/nail/hair maintenance. This is especially important as the 50+ population quickly expands into the year 2030, in part due to the Baby Boomers.

Another potential opportunity is in the endurance and natural energy interest groups, since energy drink demand is climbing, but caffeine is attracting scrutiny. Within the USD 206 billion consumer health industry, protein plays a major role in three categories: protein supplements (which are not sports-focused, tracked in Euromonitor’s vitamins and dietary supplements category); protein products (specifically positioned for sports and tracked in the sports nutrition category); and the meal replacement/slimming category (where protein is a key ingredient, but not necessarily all products in the category).

In the sports nutrition category, protein products take about USD 7 billion of that USD 9 billion category. Powders account for the vast majority, but bars and RTDs (Ready-to-Drink) are on the rise and will be major players in coming years, along with protein supplements. Previously thought to have unhealthy ingredients or bad taste, these convenience items have gone through image overhauls, borrowing trends from premium confectionary

brands to find fast-growing success and new competition from general wellness brands.

While protein has a healthy positioning in most markets, “Contains protein” is a claim that tends to trail other nutrient claims, such as “Contains added vitamins and fiber,” Schmidt continued.

One Euromonitor global survey asked “Which of the following factors or ingredients do you look for on food labels and food ingredient labels?” The 16,327 respondents were allowed to select multiple choices among the options listed. Results showed that protein tracks better with consumers in emerging markets. Between 20-25% of Chinese, Brazilian, Indian and Russian consumers said they looked for protein on food labels.

However, less than 10% of consumers in Germany, U.S., France, UK and Japan said so. In general, this demonstrates the need for companies to better communicate the benefits of protein to consumers. This also reflects the fact that developed countries tend to have higher dietary protein intakes, advised Schmidt.

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Opportunities and Headwinds in Global Ingredient Regulations

Regulations on food ingredients are not in harmony, or even close. Occasionally, a particular country’s regulations can be followed with some ease. However, more often, one must refer to a regional customs union, a global organization like Codex, or to the rules of the U.S., EU or Japan.

“Much will be happening in the food regulatory arena in the next five years,” said Carolyn Fisher, Senior Scientist at Decernis. “Food additive regulations are in the midst of change.”

To illustrate this point, Fisher examined the food label on a beverage with example ingredients that could be construed as an additive. She then cross-referenced those ingredients under 24 different sets of local, regional and global regulations. The

Market Scenario Planning: By the Numbers

Strategy	Weighted Average Scenarios	Soybean Purchase Pre-buy Strategy (USD)								
		\$10.50	\$11.00	\$11.50	\$12.00	\$12.50	\$13.00	\$13.50	\$14.00	\$14.50
Buy November futures & 1300 puts @28 cents on 33%	A	\$10.62	\$11.12	\$11.62	\$12.12	\$12.62	\$13.12	\$13.45	\$13.79	\$14.12
Buy November futures & 1300 puts @28 cents on 67%	B	\$10.74	\$11.24	\$11.74	\$12.24	\$12.74	\$13.24	\$13.41	\$13.58	\$13.75
Buy November futures & 1300 puts @28 cents on 100%	C	\$10.86	\$11.36	\$11.86	\$12.36	\$12.86	\$13.36	\$13.36	\$13.36	\$13.36

SOURCE: STEWART-PETERSON INC.

■ This chart shows a purchase strategy coordinated by Stewart-Peterson, Inc., when the soybean market was at USD13. When the market price shifts to one of various price scenarios (shown in light blue), the actual price that would be paid for the soybeans is shown in the white cells, which varies by the strategy chosen. (Note: Numbers do not reflect added fees, commissions or margin expenses.)

exercise was to show that some ingredients would be fine in some countries, but issues arise in others.

“One product does not necessarily fit in all countries because of the regulatory landscape,” she said. In most cases, protein isolates are considered food and aren’t a problem, but additives are a different story.

“So, as you’re developing that new product, please include your regulatory specialist in your discussions at the design stage,” she said. “Don’t wait until you’ve developed something and then get their approval, making them the police at the end of the process and requiring them to say, ‘No, you can’t do it. You’ll have to reformulate.’”

Carolyn Fisher, Ph.D., Senior Scientist, Decernis, cfisher@decernis.com, +1-240-428-1805. Decernis is an information company covering global food and consumer product regulations (www.decernis.com).

Market Scenario Planning: By the Numbers

Between factors (such as the weather) complicating production yields, trends impacting popularity and the constant shifts of global economies, the protein market is in constant flux and is nearly impossible to navigate. Robert Joyce, then a commercial commodity consultant at Stewart-Peterson, provided a myriad of examples from the past year to illustrate the volatility of the market. With market unpredictability a constant, companies

benefit when using strategies to minimize financial risk. One such strategy is commodity price management, which involves combining physical purchases with hedging activity to reduce the volatility.

“It is not useful to say, ‘I think milk is going to go up, so we should get pricing in place,’” Joyce advised. “Very few people ever out-guess the market.” Instead, he recommended Market Scenario Planning. “This does not predict which way the market will go for soybeans, for example; rather, it will tell you that if you put a strategy in place, you will know what you will pay for soybeans.”

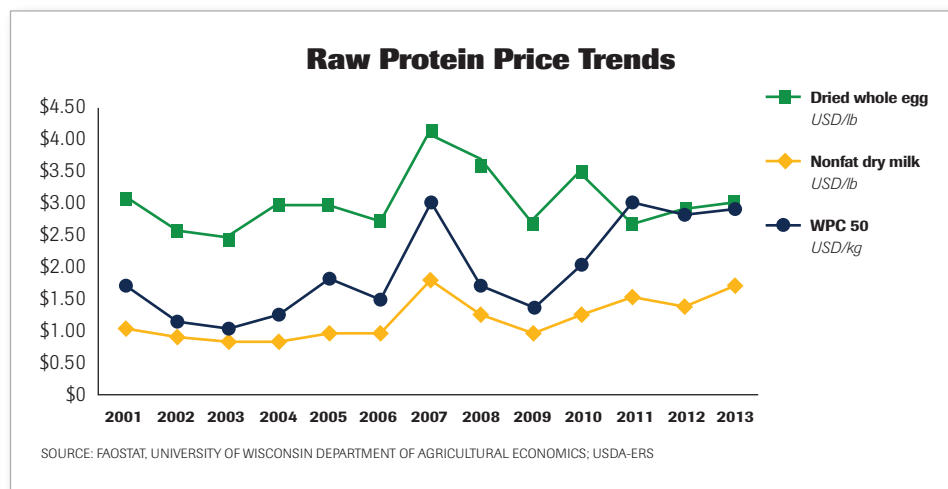
Marshall Harting, Director of Business Development, Stewart-Peterson Inc., mharting@stewart-peterson.com, 877-651-1966

So Many Proteins, So Little Time... How to Choose?

Countries like China and India are increasingly looking for animal proteins, with other global economies likely to follow suit. Consumers the world over are catching on to health and wellness trends. However, this also puts protein-enhanced products at risk.

“Global protein demand is growing faster than supply, and the U.S. is struggling to keep up,” said Daniel Best, President of Best Vantage, Inc. This failure to satiate the global demand increases volatility. “Volatility in animal protein pricing and availability will continue to be a risk factor—as far as we can see into the future—and that will also help fuel interest in plant-based proteins,” he added.

■ Global demand for protein, especially animal-based, is creating price and supply volatility. This is a comparison of dried whole egg and nonfat dry milk (USD/lb); and whey protein concentrate-50% (USD/kg), using historical prices, which many experts predict will continue to rise..



Best went on to say, “One of the driving attractions of switching [from animal- to plant-based proteins] is that, for now, the raw material costs are much lower, even though the volatility is still high. Animal protein prices and volatility are being driven, in part, by high demand in export markets. In the case of plant-based proteins, there often is a lack of capacity. Although plant protein manufacturers are still a small part of the industry, just this last year, we ran out of pea protein, simply because there wasn’t enough protein processing capacity. That will be fixed, but it’ll take some time.”

Best stressed that it’s incumbent upon the industry to learn more about plant proteins and for suppliers to teach how to use them. In the meantime, he warned, be prepared to factor availability and volatility into R&D strategies and secure interchangeable protein sources from multiple suppliers.

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Size, Share, Sources & Segments: Analysis and Forecasts for Value-added Protein Ingredient

Worldwide, protein ingredients sales amount to about eight million metric tons and USD 46.83 billion in revenues, according to the market research firm Frost & Sullivan. That said, the protein ingredient space is significantly fragmented.

“There are many sources of protein and much competition for a limited number of end applications,” said Christopher Shanahan, Frost & Sullivan’s Global Program Manager of Food, Ingredients & Feed. “This makes the importance of quickly identifying and addressing opportunities and threats critical.”

From 2013 to 2020, Frost & Sullivan projects a 5.7% growth in global demand and 7% increase in revenues. It predicts the revenue growth will not only be due to rising prices, but also demand from the food industry for specialized protein ingredients; increased demand in emerging economies; and the increased popularity due to promotion of health benefits.

While the U.S. and Europe continue to be the largest markets (both focused mostly on dietary and sports nutrition supplements), they expect the Asia-Pacific region and other developing areas looking

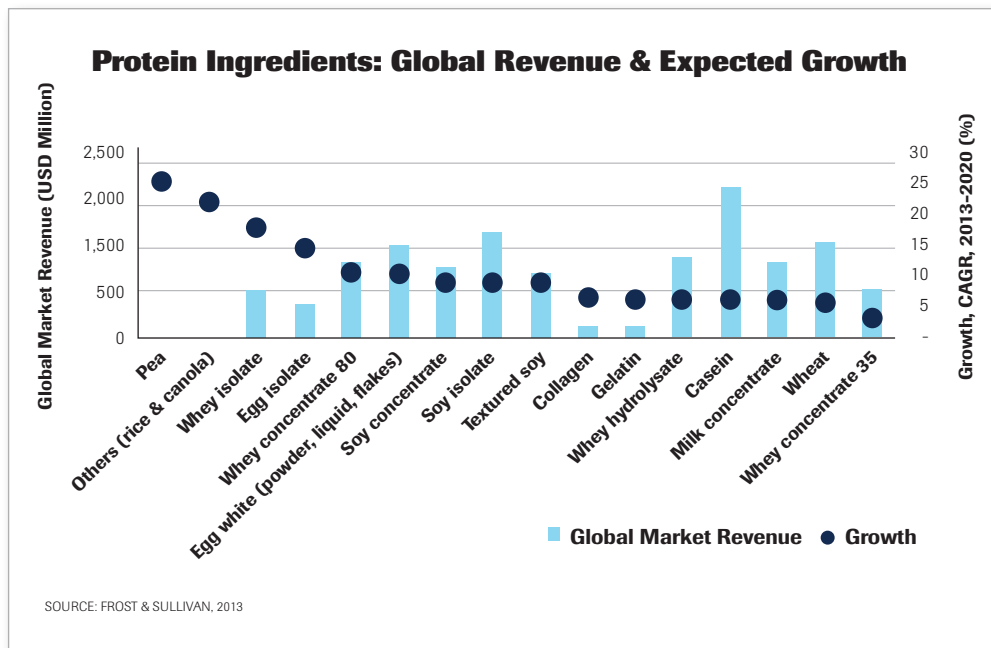
Protein Trends & Technologies: Consumer Protein Perceptions and Needs

Upon analyzing several consumer surveys conducted at the end of 2013 and start of 2014, the global market research firm NPD Group found interesting differences in consumers' perceptions and habits, when it comes to proteins. While consumer interest continues to rise, the sources and where they turn to find protein is evolving and depends dramatically on the type of consumer. In general, roughly half of consumers consider animal protein

the best source of protein, followed by eggs (11%), dairy (10%), beans/lentils (8%), and items like protein bars and nuts (22%). Within the animal protein sector, the breakdown is beef (18%), chicken (17%), fish (10%), turkey (2%) and other (2%).

Interestingly, the trend in household animal meat consumption has been on a consistent decline since the early 1980s, according to NPD's findings. "Much of this could be due to the economy or

NPD Group asked 2,211 primary U.S. household grocery shoppers to choose from 33 items in answering, "Which do you feel is the best way to get your protein?" Lunch/deli meat was not considered an animal protein, and "other" includes pork/ham, lamb, shellfish and bacon.



The expected market revenue of specific proteins in the coming years (the bars and left axis), but also their expected growth (the dots and right axis) are shown here. Frost & Sullivan expects incumbent ingredients to continue dominating the market, but niche ingredients—such as pea-, rice- and canola-based proteins—will emerge as serious contenders.

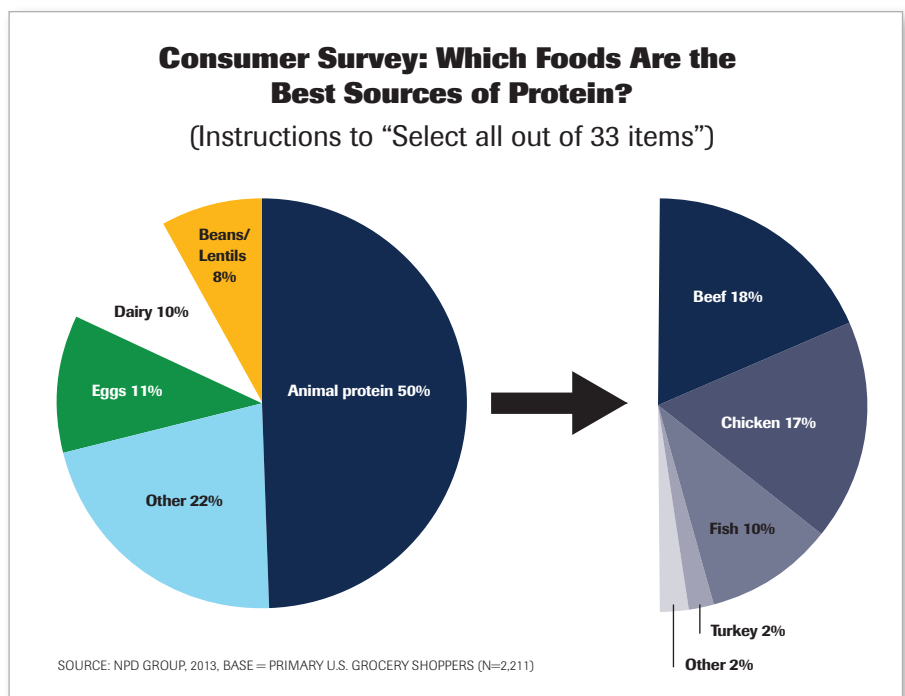
for infant formula and clinical nutrition to overtake the U.S. and Europe by 2020.

The health and wellness trend is the primary driver sustaining the growth of the protein ingredients base in the long run, noted Shanahan. If one looks at developing economies, proteins are used for just basic nutrition; but here—or in Europe or Japan—it's about value-added products. There are different strategies for each, but it still basically fills the needs of health and wellness, he said. He added that interest in proteins is heavily tied to economic status.

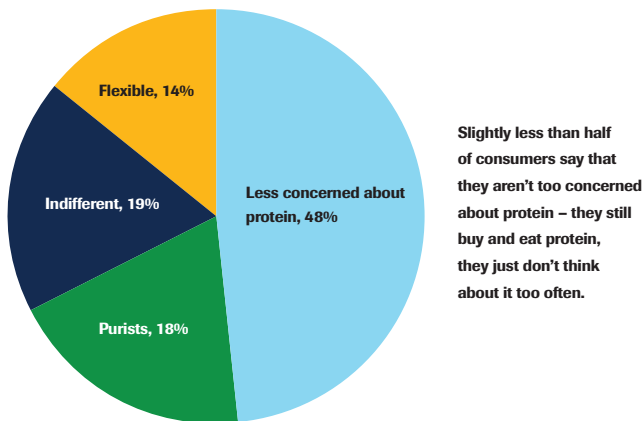
"So, if you're on top of things watching that, you could potentially be the first to market to those areas," Shanahan opined.

As far as products are concerned, Shanahan said he expects big things from pea-, rice-, algae- and canola-based proteins in the near future. "There's a great deal of R&D going on right now with a lot of firms pushing to replicate the properties of animal proteins in this space," he said. "They're ready to compete, so look out."

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Consumer Segments in Protein



Slightly less than half of consumers say that they aren't too concerned about protein – they still buy and eat protein, they just don't think about it too often.

SOURCE: NPD GROUP

■ To better understand the protein consumer, NPD broke down the data from primary U.S. household shoppers and categorized the shoppers into three distinct groups: Traditional Protein Purists, Flexible Protein Users and the Knowledgeable-but-Indifferent group.

driven by convenience,” said Sue Fennelly, Director of Business Development, Food & Beverage Services. While beef is on top for now, household consumption of it has dropped significantly over the past few decades, whereas chicken and eggs have risen consistently during the same span.

Yogurt, once thought to be “the food of the decade,” because of its 12% rise between 2003-2011 (mostly due to Greek yogurt), has flat-lined during the past three years. To better understand the protein consumer, NPD broke down the data from primary household shoppers and categorized the shoppers into three distinct groups.

The Traditional Protein Purists are mostly comprised of 50+ year-old, empty-nesters that shop at traditional grocers. This group firmly believes meat is the best source of protein and is less interested in new sources of protein. Flexible Protein Users, however, eat protein at a very high rate (85% daily); are more likely to be female; and are more vigilant researchers when it comes to their groceries. They're very willing to switch to new proteins and often shop at high-end grocers.

The Knowledgeable-but-Indifferent group resides somewhere in the middle. It is composed primarily of Millennials—only half of which eat protein every day and don't seem bothered by that fact—and are more likely to shop at discount outlets. Importantly, this group believes protein-enriched products are just as good as naturally present ones.

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The Creatine Cartel: The Good, Bad, and Ugly of the Sports Nutrition Market in Latin America

Latin American economies are generally on the upswing, and the demand for nutritional supplements is at an all-time high. Certain supplements that retail for USD 35-40 per pound in the U.S. are hiked to as high as USD 110 per pound in some Latin American markets. This, combined with the stark contrast in the financial status between upper and lower classes, has led to the emergence of a black market, or “Creatine Cartel,” as Spanish Fitness Media CEO Kit Sanderson wryly called it.

This black market is so large, he said, that it is possible that roughly 50% of domestic supplement sales in the U.S. eventually find their way overseas.

“Although it's a large market, after working for 15 years in the international sports nutrition industry, I can say that developing a market for a supplement isn't exactly ‘an easy scoop of protein,’” he said.



PHOTO COURTESY: @ISTOCKPHOTO/DEVNOS

Commonly observed practices include product counterfeiting, smuggling and aggressive price wars. Any harmonization of the marketplaces or cultures will improve the situation. “U.S. manufacturers in Latin America should be treating these issues as important as their own pulse,” Sanderson said.

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