What’s for dinner? Hint: It’s not meat.

Plant-based Meat Alternatives in Demand
Plant-based Meat Alternatives in Demand

People are changing their diets—and they’re motivated

The biggest single concern for a manufacturer entering a new market space or category is whether the number of consumers is both substantial enough and ready and willing to support new products at a given price. For plant-based meat alternatives a glance inside the consumer mindset shows a growing tendency to go “green” as the desire for healthier lifestyles drives purchases of plant-based foods and beverages. Plant-based foods are gaining momentum and according to Nielsen data, demonstrating double-digit growth. The opportunity is real.

In fact, more than half of U.S. consumers are eating an increased number of plant-based foods and beverages with global figures showing even more consumers, or 65 percent of our overseas counterparts, pursuing plant-based eating.

In proprietary research conducted with HealthFocus International in 2017, a team surveyed the eating habits of more than 1,000 U.S. consumers. Across all groups, a total of 63 percent of these consumers are increasing use of plant-based foods and close to 40 percent seek foods with plant-based ingredients.

This translates into an enormous opportunity for meat alternatives created with plant-based proteins. Figures from Innova Market Insights bears this out. The company shows plant proteins increasing in usage at double digit rates, with CAGR data for 2013 to 2017 for selected plant-based claims posting a 62 percent uptick. Plant-based innovation is “flourishing” says the market research company, due to growing consumer interest in health, sustainability and ethics.

52%

U.S. consumers eating more plant foods & beverages.

SOURCE: HealthFocus, International. Plant-Based Eating: USA DuPont Segments, August 2017
Plant-forward a Permanent Fixture

The numbers indicate this shift to plant-based dining is a permanent fixture in consumers’ lives. Most are limiting or reducing their intake of animal proteins, and of those who do, close to 60 percent say they intend to make this a permanent change, according to research conducted by HealthFocus International. And nearly 70 percent of Americans in that survey stated protein from plant sources is healthy, compared to fewer than four in 10, reporting a belief that animal protein is healthy.

One primary reason cited by more than half of all consumers is that including more plants in their diet “makes me feel healthier.” When presented with various food options, 42 percent said they prefer more plant-based foods in their daily diet. They seem intrigued by the variety available as well, with 24 percent of consumers calling plant-based ingredients “fun and interesting.” And almost a quarter of all Americans, 22 percent, have replaced other foods with plant-based foods.

How do you view your current diet?

36% 26% 26% 30% 25% 28% 13% 16%

Know it’s permanent Hoping it’s permanent Trying it May not last

Female Male

And indeed, some of the strongest motivators for consumers center around these three basic tenets: improving daily living; health-related issues, either to improve their health status or prevent illness; and social/environmental issues.
The main health drivers listed in the HealthFocus International study include heart health, selected by 63 percent of study respondents. Almost as many consumers listed illness prevention (60%) and a longer lifespan (59%) as primary health drivers for switching to meat alternatives.

Social, environmental and animal welfare drivers are also important. Forty percent listed lifestyle preference as a reason to pursue meat alternatives, with sustainable ingredients ranking a bit lower (36%), environment (35%) and animal welfare (33%) close behind.

A key concern for brand marketers is how to position a product to maximize the likelihood of purchase. Understanding consumer motivators is key to optimum positioning. Specific consumer motivators for meat alternatives closely mirror motivators for plant-based adoption in general. Among motivators for meat alternatives, an overwhelming 96 percent of respondents selected health as a primary reason for consumption. Next in line was cost, with 89 percent of respondents saying this factor ranked second only to health as a primary reason for a switch.
Health tops the list

Looking at the HealthFocus International study even further and utilizing demographic data, the study divided consumers into six segments. These include Health Helpers, who are managing health issues; Weight Strugglers, who wrestle with weight control; Health Wise, who are all about health and wellness; Taste Driven, who think the purpose of food is to taste good; Good Life, who believe that good health is a means to achieving a good life and Just Food, who eat to satisfy hunger.

Among the segmented groups, the Health Wise are most like to increase use of plant-based foods (74%) but none of the groups scored below 50 percent when measuring this purchasing and dietary inclination. Encouragingly this means that all segments are interested and not limited to just the healthy, clean label consumer who we might expect to be shifting to a more plant-based diet.

People want good taste and texture (plus convenience and variety)

In every survey among consumers, taste and texture are the single greatest determinants in driving purchase behavior. Unsurprisingly the primary factor consumers seek in meat alternatives is taste and enjoyment (48%). The research also highlighted that about one-third of consumers are looking for convenience, value and variety. This suggests that the market is far from saturated and consumers have unmet needs. Meat alternatives that meet expectations for being delicious, satisfying and well positioned will succeed in this new market. Plant protein choice along with other key ingredients help deliver not just desired protein content, but the proper bite, chew, mouthfeel, taste and appearance, designed to create a successful product.

What consumers want from meat alternatives

SOURCE: HealthFocus, International. Plant-Based Eating: USA DuPont Segments, August 2017
Nutritional Expectations – Protein First

The buzz around protein has not subsided but is still going strong. A study by MarketsandMarkets 2018, regarding plant-based meat alternatives discovered that protein is the most important nutrient of concern, listed by 91 percent of consumers discussing their nutritional expectations. This was followed by fiber, listed by 43 percent of respondents.

And, although there exists a variety of plant-based protein products to help create meat alternatives, the three top alternate protein sources with the highest level of consumer interest are brown rice, oat and soy. With more than 60 years of experience in the plant protein arena, experts at DuPont are well placed to help you formulate a plant protein product to deliver on taste and texture expectations, as well as product stability and shelf-life issues.

Top 3 alternate protein sources with highest consumer interest

- Brown rice protein
- Soy protein
- Oat protein

Nutritional expectations

- 91% Protein
- 43% Fiber
- 39% Calcium
- 31% Omega 3
- 25% Low-sodium

SOURCE: Markets and Markets 2018
The meat alternative market offers tremendous potential at this early stage with opportunities not currently being met. There exists a plethora of meat products to emulate, from chicken or turkey to pork, beef, and of course, a vast ocean of seafood. People are still searching for the right balance of taste and texture, with foods in a convenient form and a variety that will pique their curiosity and tantalize their taste buds.

Plus, the link between label claims and premium pricing can be inferred by various market research studies. Consumers are willing to pay five to 10 percent more for the right meat alternative than for comparable, traditional products, according to HealthFocus International. Plant-based products can also offer additional labeling benefits that resonate with consumers. According to Innova Market Insights, these include claims like convenient, vegan, GMO-free, high source of protein, or allergen free.

Plant-based foods are in high demand and boundless application possibilities hold great potential. DuPont can help turn this potential into reality, built on a solid foundation of technical expertise, sensory capabilities and an expansive ingredient lineup designed for plant-based applications.

**Top 5 positioning claims on meat alternatives**
- Convenience
- Vegan
- GMO Free
- High source of protein
- Allergy

**Consumers willing to pay**

5-10% more for meat alternatives.

*SOURCE: HealthFocus, International, Plant-Based Eating USA DuPont Segments, August 2017*

*SOURCE: Innova Market Insights, August 2018*
DuPont has a tremendous range of ingredients to appeal to consumers’ requirements for meat alternatives, with solutions to address most of the key formula requirements, notably protein, binding, food protection and color. We offer a variety of plant protein options in an array of formats. Notably, both soy and pea protein have high positive consumer perception among plant proteins.

**Complementary Ingredient Solutions**

Beyond our protein solutions, DuPont Nutrition & Health offers a range of novel ingredient systems that help meat alternative manufacturers achieve both sensory and technical goals in product applications. Our ingredients aid with structure and binding to improve mouthfeel, flavor perception, product texture and appearance. Shelf-life solutions can improve oxidative stability during refrigerated storage and control microorganisms. Our color solutions improve visual appeal of products to help stimulate the appetite to increase consumer cravings. Let our experts in meat alternative applications guide you in selecting the right solution for your next project.
### Protein

**Textured Plant Protein Concentrates**  
Min. 65% protein  
- **Functionality:** Simulates ground meat when hydrated. Exhibits an open texture, clean flavor.  
- **Applications:** Formed products, such as meatballs, patties or nuggets, and as ground-meat particulates.

**Structured Plant Proteins**  
58 – 71% protein  
- **Functionality:** When hydrated, delivers a neutral flavor and unique meat-like fibrosity and texture.  
- **Applications:** Meat-free alternatives resembling whole muscle textures in chunks, patties or sausage-type products.

**Isolated Plant Proteins**  
Min 90% protein  
- **Functionality:** Binds ingredients, fat and water; provides gelling properties. Improves juiciness, succulence, overall eating experience.  
- **Applications:** Emulsified, ground, whole muscle or formed applications.

**Functional Plant Protein Concentrates**  
69% protein  
- **Functionality:** Emulsifies fat, provides superior forming, water- and fat-binding. Improves juiciness, succulence, overall eating experience.  
- **Applications:** Emulsified, ground, whole muscle or formed applications.

### Binding/Structure Solutions

- **METHOCEL™ Bind**  
- **WELLENCE™ VegE Form**  
- **WELLENCE™ Reform**  
  - Improves forming and handling of raw products and delivers hot texture and juiciness after cooking or heating. Reduces fat pickup.

- **GRINDSTED® Meatbinder**  
  - Improves forming, mouthfeel, flavor perception and juiciness. Also acts as a fat mimetic.

- **GRINDSTED® Meatline CFF Blends**  
  - Improves mouthfeel, flavor perception and juiciness. Improves cling and freeze/thaw stability of sauces.

### Sensory & Shelf-Life Solutions

- **GUARDIAN® & GRINDOX® Antioxidants**  
  - Protects flavor and improves oxidative stability during refrigerated storage.

- **MicroGARD® NovaGARD® Nisaplin® Antimicrobials**  
  - Protects flavor, improves savory notes and controls outgrowth of spoilage microorganisms during refrigerated storage.

### Color Solutions

- **BioColor™ Natural Colors**  
  - A wide array of clean label color solutions that improve visual and appetite appeal.
DuPont Nutrition & Health, a DowDuPont Specialty Products Division business, combines in-depth knowledge with current research and expert science to deliver unmatched value to the food, beverage, pharmaceutical and dietary supplement industries. We are innovative solvers, drawing on deep consumer insights and a broad product portfolio to help our customers turn challenges into high-value business opportunities.