

Protein Systems: Plant-forward protein solutions

Three levels of solutions and services to
meet consumer demands.



The market opportunity.

The popularity of plant protein is continuing to gain global momentum and shows no signs of slowing down. As plant-based eating has gone mainstream, more consumers are looking for environmentally friendly, plant-based solutions that reinforce their health-focused lifestyle goals, while still delivering a culinary-forward taste profile and a variety of accessible formats.

\$307B

Expected value of the global alternative market* by 2030¹.

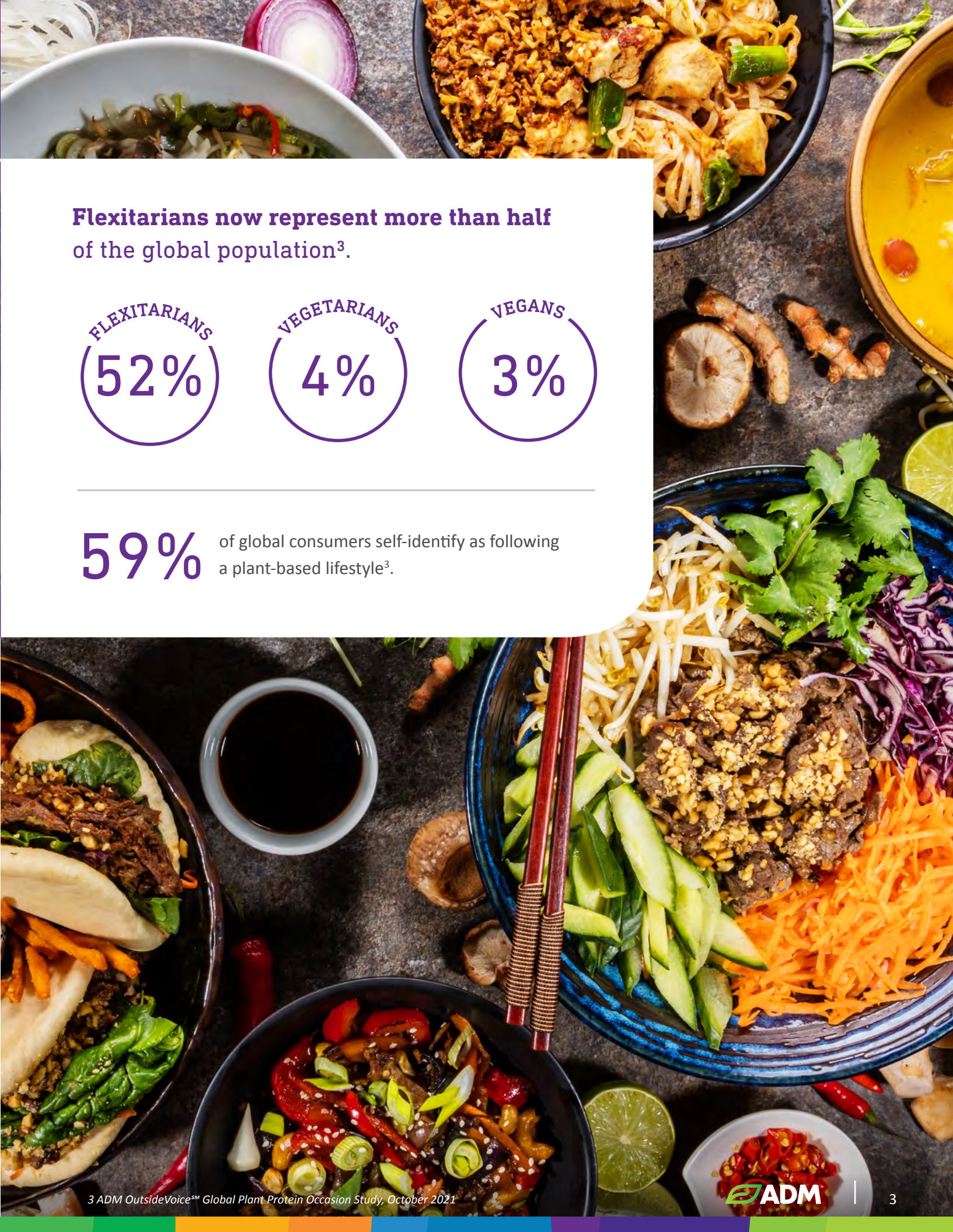
10%

The expected compound annual growth rate (CAGR) for top alternative protein categories* from 2021 to 2030¹.



A big market opportunity is knocking for your brand.

COVID-19 has had a profound effect on the plant-based market, increasing appeal. **50% of experienced global plant protein users increased their consumption of alternative proteins** during the pandemic, mainly because of greater health consciousness².



Flexitarians now represent more than half of the global population³.



59% of global consumers self-identify as following a plant-based lifestyle³.






* Among top alternative categories: meat alternatives, dairy alternatives, sports nutrition, snacking, ready meals.
1 ADM InsideVoiceSM, January 2022
2 Blue Horizon and BCG Customer Survey, February - April 2022, n=3,729, BCG Analysis 2022






3 ADM OutsideVoiceSM Global Plant Protein Occasion Study, October 2021

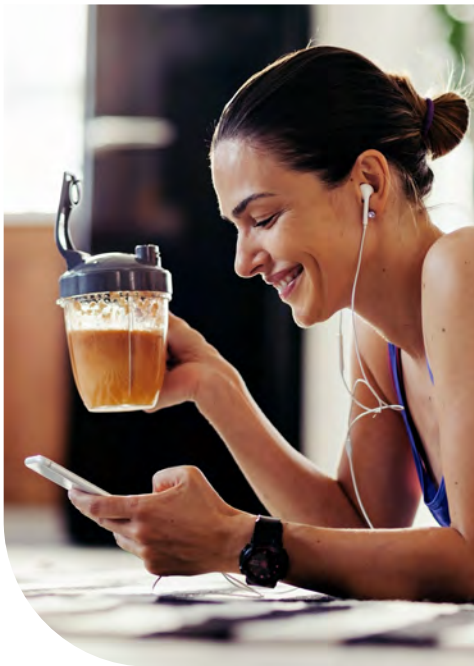
Global consumer motivations to alternative products.

Health reigns supreme.

In looking for plant-based solutions that reinforce their nutrition and health-focused lifestyle goals, **global consumers see perceived health benefits* as the top motivation for consuming meat and dairy alternatives**—with animal welfare concerns and nutritional benefits closely following⁵.

Top Motivations for Meat Alternatives				
	Health Benefits	Nutritional Benefits	Environmental Concerns	Animal Welfare Concerns
	65%	59%	64%	54%
	61%	64%	49%	60%
	58%	72%	56%	64%
	74%	73%	74%	68%
	57%	49%	53%	49%
Global Total	63%	63%	59%	59%

Top Motivations for Dairy Alternatives				
	Health Benefits	Nutritional Benefits	Environmental Concerns	Animal Welfare Concerns
	62%	55%	44%	40%
	59%	47%	45%	44%
	49%	46%	45%	49%
	64%	55%	57%	46%
	57%	57%	48%	36%
Global Total	58%	52%	48%	43%



Today's modern protein consumer.

ADM Systems paves the way for mindful, modern protein.

As consumers become increasingly savvy about proteins they desire in food and beverage experiences; they yearn for new plant-based offerings that meet their health and wellness motivations.

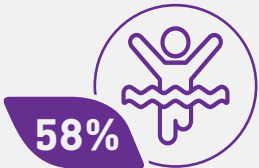


59% of global consumers say they would like more protein in their diet.⁴



ADM's Protein Systems platform was designed with today's wellness-focused consumer in mind.

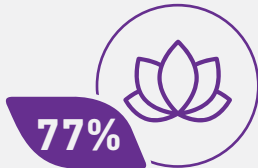
Consumers associate protein with healthy living and healthy aging. A larger percentage of consumers connect protein to these top benefits⁴:



Helps me stay active as I age



Helps support the immune system



General health and wellness

Through the delivery of consumer-preferred next-generation plant-based products, along with accelerated speed-to-market capabilities, an unmatched pantry of solutions and a legacy of world-class technical expertise, now you can serve up solutions for this growing demand.

Discover ADM's ever expanding Protein Systems platform with three levels of integrated solutions and services to meet any need.

4 *As a result of our OutsideVoiceSM primary research
5 ADM OutsideVoiceSM Global Protein Consumer Discovery Study, August 2020

Level 1: MaxFlex™

At a glance.

What is MaxFlex™?

+ Protein-advantaged powdered blends to maximize protein diversity and optimize protein quality.

Gain an edge.

+ For synergistic, positive nutrition and protein-diverse applications, add MaxFlex™ protein-advantaged powdered blends in plant-forward bakery, snacking, beverage, specialized nutrition and dairy alternative products.

Available offerings.

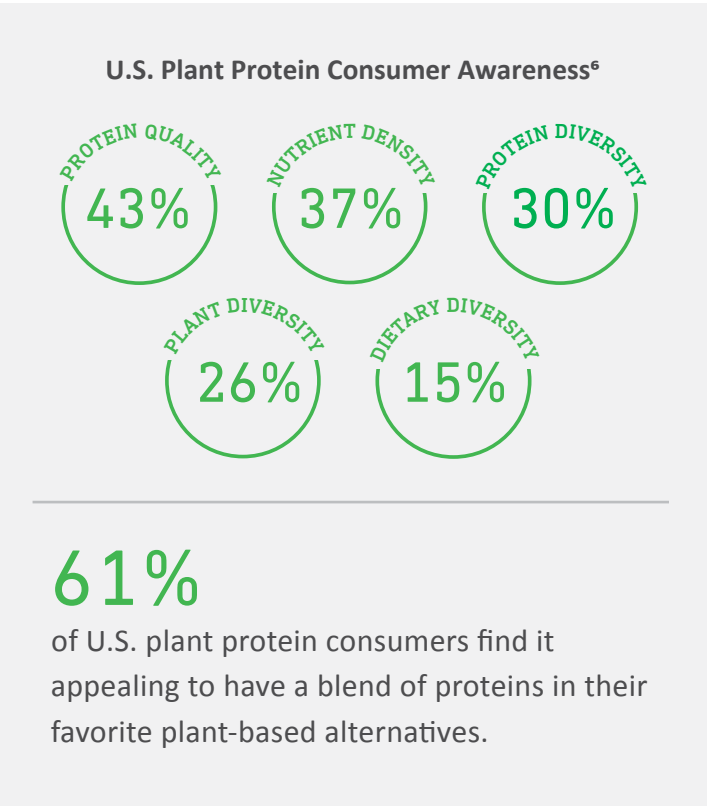
- + MaxFlex™ Pea Wheat 002
- + MaxFlex™ Pea Rice 003



Consumer insights.

As today’s Flexitarian consumers are making smart choices that align with their motivations for health and nutrition, they’re also looking to incorporate more plant proteins into their diets. As the source of protein matters to global consumers⁵, they’re growing increasingly savvy about the types of plant proteins used in their favorite plant-forward food and beverages. They are familiar with terms such as protein quality, protein diversity, and nutrient density⁶.

66% of global Flexitarians are approaching the lifestyle by adding more plant-based foods and beverages to their diets (Plant+ Flexitarian)³.



APPLICATION CONCEPT:
Thin-Crisp Blueberry Lemon Cookie

DESCRIPTION

This delicious, high protein Thin Crisp Blueberry Cookie features superior protein nutrition along with the same scrumptious taste, texture and mouthfeel as the classic wheat flour version. Using MaxFlex™ Pea Rice boosts the protein level enabling a good source of protein claim.

CHALLENGE

Creating a protein-packed indulgent snack that still delivers pleasing taste and appearance for an exceptional sensory experience.

CHALLENGE SOLVED

Always up to the task, our team created an indulgent, protein-packed cookie by utilizing a protein-diverse blend that increased the protein amount from a low 2 grams, to a staggering 6 grams. The result was a well-rounded and permissibly indulgent snack, perfect for the Flexitarian consumer not willing to sacrifice on taste or nutrition. Through decades of formulation expertise, technical know-how, and our full pantry product development capabilities, we achieved the perfect balance of great taste and protein-rich nutrition in every bite.



Nutrition Facts	
Serving size	3 cookies (36g)
Amount Per Serving	
Calories	170
Total Fat 8g	
Saturated Fat 3.5g	
Trans Fat 0g	
Cholesterol 5mg	
Sodium 135mg	
Total Carbohydrate 20g	
Dietary Fiber 1g	
Total Sugars 13g	
Includes 12g Added Sugars	
Protein 6g	
Vitamin D 0mcg	
Calcium 0mg	
Iron 0mg	
Potassium 0mg	
Riboflavin 4%	
Copper 4%	

*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

CONCEPT HIGHLIGHTS

- + Protein Enriched (6g/36g Portion Size)
- + Protein Diversity Through Multiple Sources of Proteins

ADM INGREDIENTS

- + MaxFlex™ Pea Rice 003
- + NutriStem™ Navy Bean Powder
- + Sorghum Flour
- + Palm Oil
- + Natural Flavors

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- + Egg

3 ADM OutsideVoice™ Global Plant Protein Occasion Study, October 2021
5 ADM OutsideVoice™ Global Protein Consumer Discovery Study, August 2020
6 ADM OutsideVoice™ Plant Protein Blends Study, December 2021

Level 2: AccelFlex™

At a glance.

What is AccelFlex™?

- + Value-added protein ingredients to address your texture, structure and function challenges.

Gain an edge.

- + Leverage AccelFlex™ functional or texture systems to deliver the bite and chew consumers expect and accelerate production of on-trend plant-forward products that meet your nutrition needs.

Available offerings.

AccelFlex™ Texture Systems:

- + AccelFlex™ TS ST60-E Soy Crisps
- + AccelFlex™ TS ST60 Non-GMO IP Soy Crisps
- + AccelFlex™ TS ST80 Non-GMO IP Soy Crisps
- + AccelFlex™ TS Fibrous Soy S68
- + AccelFlex™ TS PC70 Textured Pea Protein (pea and chickpea)
- + AccelFlex™ TS PN65 Textured Pea Protein (pea and navy bean)

AccelFlex™ Functional Systems:

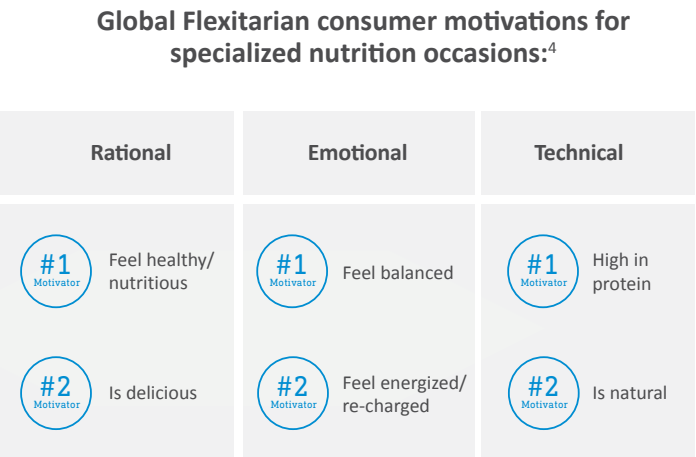
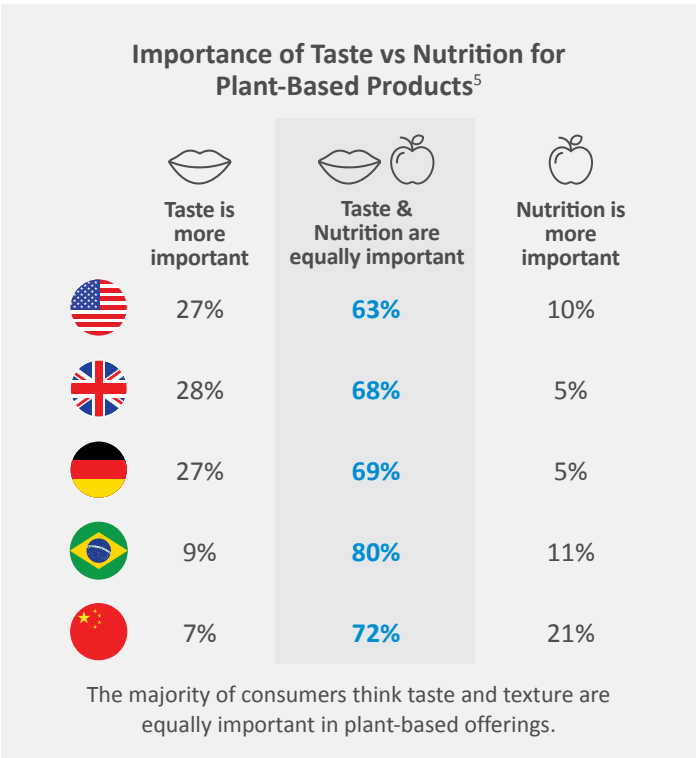
- + AccelFlex™ Soy-Based Binder System
- + AccelFlex™ Pea-Based Binder System

Delivering Maximum Nutritional Value

The demand for plant-forward specialized nutrition products is on the rise. Today 59% of global specialized nutrition* occasions feature plant-based proteins. With 27% of today’s global specialized nutrition occasions dominated by nutritional bars, consumers are looking for better-for-you in-between meals and snacking opportunities. They strive for high protein and other functional benefits that make them feel energized, healthy, and balanced.⁴

Consumer insights

Today’s Flexitarian consumers seek products with maximum nutritional value and digestive benefits. Growing interest in both the human microbiome and plant-based ingredients reflect this holistic movement. The result is an opportunity to highlight on-trend concepts that keep taste and nutrition top of mind for those who are unwilling to compromise.



APPLICATION CONCEPT:

Blueberry Apple Protein Crisp Bar

DESCRIPTION

We’ve loaded a whopping 7 grams of complete plant protein into this fruit-filled bar that has only 4 grams of added sugar. Indulge your senses with the sweet taste of blueberry and apple, and a crunch that makes it truly memorable. Here is a different kind of quality-protein bar, one that fills your mouth with a sweet fruit explosion along with a satisfying multisensorial pop of the AccelFlex™ soy crisp that will have people reaching for it again and again.

CONCEPT HIGHLIGHTS

- + 7g Plant-based protein per 40g serving
 - + 18 CFUs DE111® & 1-B Cells HT BPL1™
 - + 5g Fiber per 40g serving
 - + 4g Added sugar per 40g serving
 - + Non-GMO Ingredients
- ADM INGREDIENTS**
- + AccelFlex™ TS ST80 Non-GMO IP Soy Crisps
 - + ProFam® 936 Soy Protein Isolate
 - + NutriStem™ Quinoa Crisps
 - + Heat-treated BPL1™ (*Bifidobacterium animalis* subsp. *lactis* CECT8145)
 - + *Bacillus subtilis* DE111®
 - + Fibersol®
 - + Other ADM specialty ingredients, sweeteners and flavors

ALLERGENS

- + Soy
- + Dairy
- + Coconut



Nutrition Facts	
servings per container	
Serving size	(40g)
Amount Per Serving	
Calories	150
Total Fat 5g	
Saturated Fat 3.5g	
Trans Fat 0g	
Cholesterol 0mg	
Sodium 115mg	
Total Carbohydrate 22g	
Dietary Fiber 5g	
Total Sugars 8g	
Includes 4g Added Sugars	
Protein 7g	
Vitamin D 0mcg	
Calcium 13mg	
Iron 1mg	
Potassium 36mg	

CHALLENGE

Creating an on-trend, balanced bar that provides multisensorial texture, targeted nutrition, quality protein and dietary fiber to meet consumers’ pursuit for healthy living lifestyle practices.

CHALLENGE SOLVED

Rising to meet this challenge, our experts handcrafted excellence—an indulgent, high-protein bar with a desirable puffed and poppable texture. The nutritional punch comes from the non-GMO AccelFlex™ TS 80% Soy Protein Crisps, which boast a PDCAAS score of 1, qualifying them as a complete protein source from plants! This permissibly indulgent bar doesn’t contain the dryness or off-notes often found in other high protein offerings and also supports overall health and immune function through formulation with pre-, pro- and postbiotics.

Our expansive, market-leading ingredients pantry, combined with our technical prowess, enables us to deliver new food possibilities. By partnering with us, you can leverage our plant-based expertise in taste, texture, nutrition, function and even color to bring innovation to life and set new standards. Our expertise helps create on-trend, plant-based bars, clusters and cereals with the taste and texture modern consumers demand.

4 ADM OutsideVoice™ Global Plant Protein Occasion Study, October 2021
5 ADM OutsideVoice™ Global Protein Consumer Discovery Study, August 2020
* Sports Nutrition and Meal Replacement Products (bars, powders, and/or ready-to-drink shakes)

Level 2: AccelFlex™

At a glance.

What is AccelFlex™?

- + Value-added protein ingredients to address your texture, structure, and function challenges.

Gain an edge.

- + Leverage AccelFlex™ functional or texture systems to deliver the bite and chew consumers expect and accelerate production of on-trend meat alternative products that meet your nutrition needs.

Available offerings.

AccelFlex™ Texture Systems:

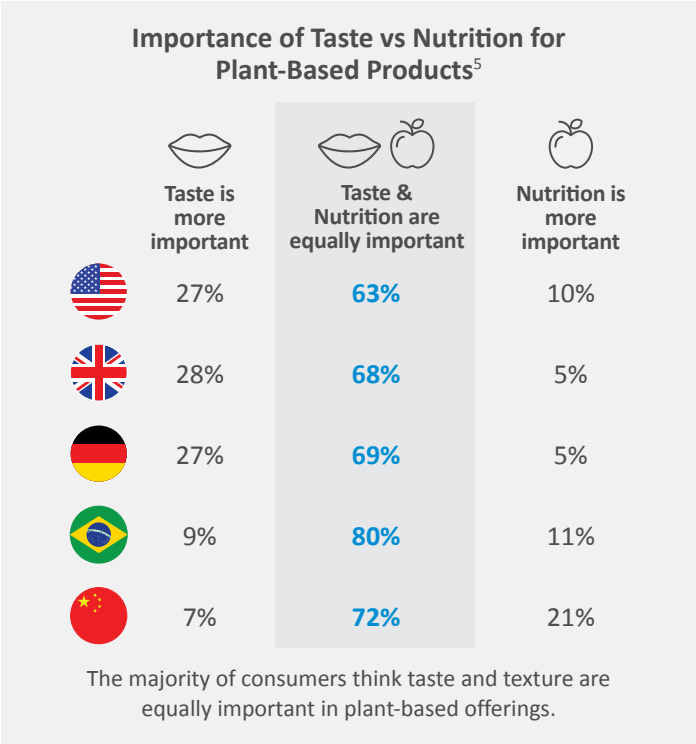
- + AccelFlex™ TS Fibrous Soy S68
- + AccelFlex™ TS ST60-E Soy Crisps
- + AccelFlex™ TS ST60 Non-GMO IP Soy Crisps
- + AccelFlex™ TS ST80 Non-GMO IP Soy Crisps
- + AccelFlex™ TS PC70 Textured Pea Protein (pea and chickpea)
- + AccelFlex™ TS PN65 Textured Pea Protein (pea and navy bean)

AccelFlex™ Functional Systems:

- + AccelFlex™ Soy-Based Binder System
- + AccelFlex™ Pea-Based Binder System

Consumer insights.

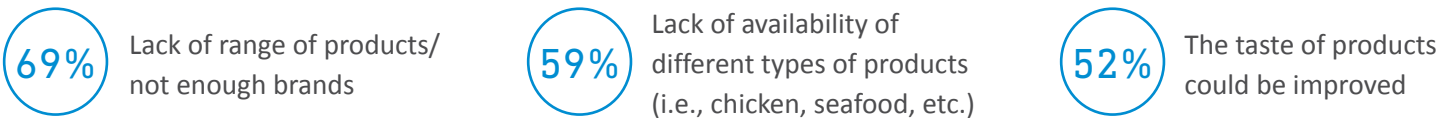
Our research has found that a majority of today's Flexitarian consumers want their meat alternatives to not only taste great, but also embody the same texture, mouthfeel and appearance as animal-based meat creations. These alternatives must be seen to mimic the experience of eating tried-and-true meat-based products⁵. This works in tandem with the need for options that support health-focused lifestyle choices, because we know today's Flexitarian consumers aren't willing to compromise.



Substitution not sacrifice.

Many consumers admit they struggle to give up meat and dairy in the long-term because of their dissatisfaction with the alternative's taste and texture⁴. Other consumer-identified barriers and opportunities to consumption that ADM can help you address are as follows:

Why are global consumers dissatisfied with meat alternatives?⁴



APPLICATION CONCEPT:

Plant-Based Homestyle No-Meatball

DESCRIPTION

Indulge your senses with this vegan take on a savory, homestyle meatball that pairs well in a sauce, with pasta, on a hoagie, or as a standalone appetizer sure to excite. This mouthwatering meat alternative is protein-packed and loaded with rich, decadent flavor that provides the expected taste and texture consumers seek.

CHALLENGE

Creating a plant-based meat alternative that provides a meat-like experience in texture and structure with all the savory flavor the consumer expects.

CHALLENGE SOLVED

Never one to back down from a no-meat challenge, we crafted a plant-based meatball that looks and tastes similar to a meat-based product—truly a perfect substitution without sacrifice. Powered by a unique pea and chickpea textured crumble, this high-water holding capacity inclusion replicates the structure in meat experiences like never before. Pair that with our savory flavor expertise and now you have both the taste and texture familiarity in your meat alternative meals. Utilizing our exceptional facilities and unmatched technical expertise, we have developed a formulation with this star ingredient that not only elevates the consumer eating experience, but also delivers deliciousness in every dish.



Nutrition Facts	
Serving size	3 Meatballs (85g)
Amount Per Serving	
Calories	200
	% Daily Value*
Total Fat 15g	19%
Saturated Fat 1g	5%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 520mg	23%
Total Carbohydrate 6g	2%
Dietary Fiber 2g	7%
Total Sugars Less than 1g	
Includes 0g Added Sugars	0%
Protein 13g	
Vitamin D 0mcg	0%
Calcium 0mg	10%
Iron 0mg	15%
Potassium 0mg	4%

*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

CONCEPT HIGHLIGHTS

- + 100% Plant-Based
- + 13g Plant-Based Protein per 85g Serving
- + 15% RDA of Iron per 85g Serving

ADM INGREDIENTS

- + AccelFlex™ TS PC70 Textured Pea Protein
- + AccelFlex™ FS Binder
- + Natural Pork Sausage Type Flavor
- + Natural Pea Protein Masking Flavor

ALLERGENS

- + None (Free of the Big 8 U.S. Allergens)



Level 3: EdgeFlex™

At a glance.

What is EdgeFlex™?

+ Service platform offering you a solutions focused approach to your product needs that enables speed to market, all with unmatched technical expertise and world-class applications support.

Gain an edge.

+ For those looking for variety and culinary-inspired, plant-forward product formulation expertise, leverage EdgeFlex™, the promise of ADM, and our industry relationships to support next-gen meat alternative solutions.

Available offerings.

Meat alternative solutions for:

- + Plant-Based Poultry Systems
- + Plant-Based Pork Systems
- + Plant-Based Beef Systems

Consumer insights.

As more consumers continue following plant-based lifestyles, their interest in elevated and global plant-based solutions is growing exponentially, allowing them to mix up their mealtimes and become their own kings and queens of the kitchen. Our recent research with global consumers showed that shredded/pulled meats are the #2 ranked format globally (after crumbles/ground meats), and the #1 format that generates the most interest in the U.S., China and Germany.

Meat alternative formats global consumers are most interested in trying but have not yet tried*:



Crumbles/Grounds Meat Alternative
34%



Shredded/Pulled Meat Alternative
33%



Deli Meat Alternative
31%

Going beyond consumer kitchens to solve commercial-grade cuisine challenges.

From our global protein occasion study we learned⁵:

55% vs 41%
Foodservice occasions Total occasions

Global meat and dairy consumers' openness to switching to plant-based options.



Plant-based foodservice occasions are on par with or overperform relative to total food and beverage occasions.

EdgeFlex™ can elevate any foodservice offering.
Partner with our team today!

APPLICATION CONCEPT:

Halal-Style Plant-Based Chicken Shred

DESCRIPTION

This juicy, plant-based shredded chicken is expertly seasoned with an authentic Halal-style spice mixture to replicate the on-trend Middle-Eastern cuisine's taste and flavor. Most commonly found in large city center food carts, alternative meats like this can be used across a wide variety of applications and has limitless inclusion potential for endless applications. Leverage ADM's EdgeFlex™ service platform to innovate your protein-packed meal solutions today.

CHALLENGE

Create an on-trend meat alternative format that powers any snack or meal solution. Variety is a spice of life!

CHALLENGE SOLVED

Applying our EdgeFlex™ service platform to our unmatched ingredient pantry, we crafted a plant-based chicken alternative concept that looks and tastes almost identical to any meat-based, Middle-Eastern street cart favorite. Our future forward consumer insights coupled with our expansive technical expertise and innovative service platform have allowed us to perfect an easy, versatile format for any solution.



Nutrition Facts	
Serving size	1/2 cup (54g)
Amount Per Serving	
Calories	50
	% Daily Value*
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 200mg	9%
Total Carbohydrate 4g	1%
Dietary Fiber 3g	11%
Total Sugars 1g	
Includes 0g Added Sugars	0%
Protein 10g	
Vitamin D 0mcg	0%
Calcium 6mg	0%
Iron 0mg	0%
Potassium 35mg	0%

*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

CONCEPT HIGHLIGHTS

- + 100% Plant-Based
- + 10g Plant-based Protein per 1/2 Cup Serving
- + 3g Fiber per 1/2 Cup Serving

ADM INGREDIENTS

- + Arcon® T Textured Soy Protein Concentrate 158-101
- + Natural White Meat Chicken Type Flavor
- + Natural Soy Masking Flavor
- + Natural Shawarma Seasoning

ALLERGENS

- + Soy





Why ADM Protein Systems.

Get an edge with true plant protein perfection, thanks to Protein Systems.

ADM is a full solutions partner, who understands your formulation challenges, and can help you optimize your product for market—from marketing insights and consumer validation to sensory testing. We invest in new technology and processing methods to bring you what's next in protein nutrition solutions, today. You can count on ADM to keep delivering, with quality of product and reliability of supply.



Our advantage.

Through science-backed product development, our team paves the way to create consumer-desired solutions. With the ability to leverage our vertically-integrated portfolio in conjunction with expert taste, nutrition, texture, functional benefits, and color considerations we can bring “One ADM” solutions to the next level.

Partner with our specialists to gain extensive cross-functional team expertise, global manufacturing and supply chain footprint assistance for any stage of the value chain to achieve tailored, innovative and expertly-designed plant-based products.

Let's Collaborate.

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