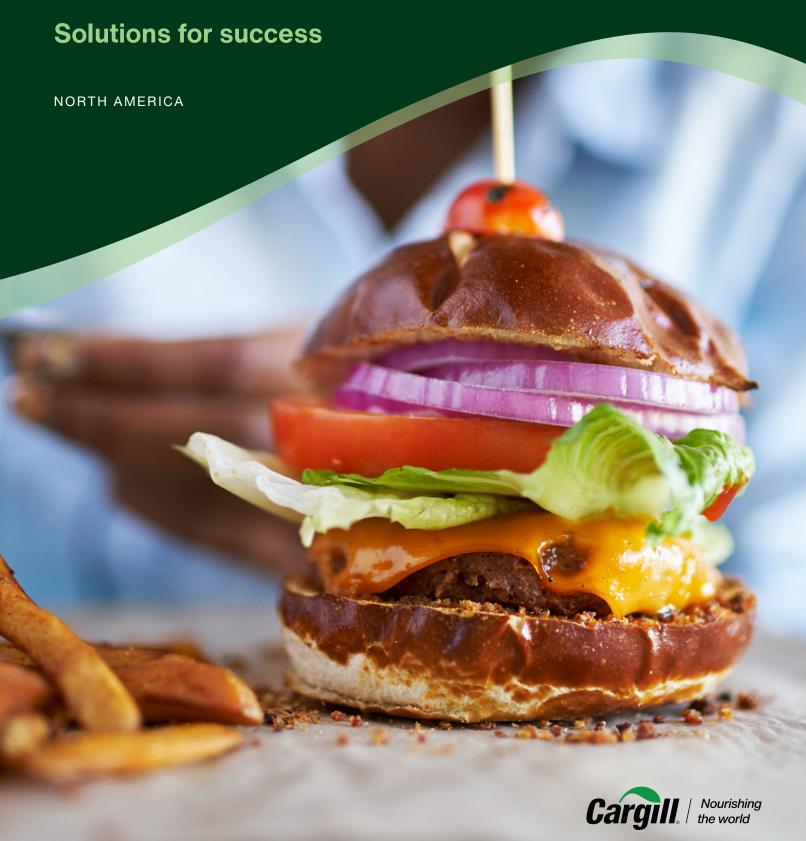


## Meat Alternatives



## Together, we can meet the growing appetite for alternate sources of protein.

A soaring global population and growing interest in flexitarian eating<sup>1, 2</sup> are creating opportunities for novel protein solutions. The meat alternatives market is forecasted to see double-digit growth through 2032, with a 12.25% CAGR worldwide.4

#### **EXISTING DEMAND**

Top reasons consumers do buy plant-based alternatives\*

- Healthier
- Brings variety to my diet
- Better for the environment

#### INNOVATION OPPORTUNITIES

Top reasons consumers don't buy plant-based alternatives\*

- Price / value for money
- Taste & texture
- Health concerns, perceived nutritional gaps / ingredient quality

#### CARGILL SOLUTIONS HELP YOU DELIVER ON:





© 2024 Cargill, Incorporated



**Nutrition & health** 



Sustainable solutions



Value-conscious







Solutions for meat, poultry & seafood alternatives, including:

Burgers / Ground meat / Meatball alternatives

Plant-based crumbles / Chunks

- Deli-meat alternatives
- Plant-based nuggets
- Plant-based sausages
- Seafood-style products
- Whole-muscle-meat alternatives



### **Industry-leading ingredients & expertise** to make them great:

Alternative proteins	4
Oils & fats	5
Texturizers & emulsifiers	6
Sweeteners	6





MEAT ALTERNATIVES | 4

## Alternative proteins

Proteins supply the body with essential amino acids that it can't produce on its own. Beyond nutrition, these affordable, plant-sourced proteins provide valuable functional benefits. We can help you select the right protein for your application and goals.

Product Type / Name(s)	Features & Benefits	
Pea protein Isolates & Textured PURIS® pea protein	<ul> <li>Protein enrichment with min. 80% protein</li> <li>Enhances appearance &amp; juiciness</li> <li>Provides firmness &amp; meat-like bite</li> <li>Neutral flavor with minimal aftertaste</li> <li>Great emulsion, binding &amp; cohesion</li> <li>Process-friendly; better solubility &amp; dispersibility</li> <li>Label-friendly; versatile formulation options</li> </ul>	
Soy protein Prolia® soy flour Prosanté® textured soy flour	<ul> <li>Protein enrichment with 50% protein content</li> <li>Mimics meat's natural structure, texture &amp; chewing properties</li> <li>Improves water &amp; oil binding</li> <li>Optimizes production with excellent hydration speed</li> <li>Comparable functionality to textured soy concentrate with economical cost-in-use</li> </ul>	
Wheat Protein Vital wheat gluten GluVital® vital wheat gluten	<ul> <li>Protein enrichment with min. 75% protein</li> <li>Adds structure &amp; firmness to cooked foods</li> <li>Neutral flavor profile</li> <li>Improves yields &amp; texture with enhanced water / oil absorption &amp; retention</li> <li>Certified wheat benchmarked at Silver level against SAI Platform Farm Sustainability Assessment (FSA)</li> </ul>	
	"Cargill has been supporting customers in plant proteins for more than a quarter century. With that knowledge, we can unlock some of the biggest challenges in the plant-based meatalternative segment."  Elena Zienda  Commercial Director, Meat & Dairy Alternatives	



## Oils & fats

Vegetable oils & fats are essential in plant-based meat alternatives. The ideal combination of plant-based oils and fats will help you achieve a similar appearance and melting characteristics to animal-based fat. As your partner, we can help you find the optimal mix to achieve the desired texture, sensory properties and nutrition.

Features & Benefits
Enhances sensory properties & flavor release
Prevents sticking
<ul> <li>Provides juiciness</li> </ul>
Range of solutions enable desired nutritional profile
Enhances sensory properties & flavor release
Lightens color in finished product
<ul> <li>Offers high oxidative stability for longer shelf life</li> </ul>
<ul> <li>Fully hydrogenated available</li> </ul>
<ul> <li>RSPO-certified,* sustainably sourced palm oil</li> </ul>
Supports meat-like appearance & mouthfeel
<ul> <li>Offers high oxidative stability for longer shelf life</li> </ul>
Adds succulence
RSPO-certified,* sustainably sourced palm oil
Supports meat-like appearance & mouthfeel
<ul> <li>Delivers excellent structural properties</li> </ul>
Fully hydrogenated available
Enhances juiciness
<ul> <li>Supports meat-like appearance</li> <li>&amp; mouthfeel</li> </ul>
Acts as an aroma carrier
Can reduce saturated fat, total fat
& calories
<ul> <li>Can improve product nutritional profile</li> </ul>



\*\* Licensed trademark of Cubiq Foods S.L. Currently available for testing and R&D work.

© 2024 Cargill, Incorporated. All rights reserved.



MEAT ALTERNATIVES | 6

## Texturizers & emulsifiers

The key to consumer-pleasing meat alternatives is achieving the perfect sensory experience. From firmness to slice-ability, moistness to visual appeal, Cargill texture and emulsification solutions can help create a more "meat-like" experience.

Product Type / Name(s)	Features & Benefits
STARCH	
Functional Native Starch	Provides structure & juiciness
Corn, Tapioca	<ul> <li>Improves yields &amp; texture</li> </ul>
SimPure® corn starch	<ul> <li>Excellent water-holding capacity</li> </ul>
SimPure® tapioca starch	Binds ingredients together
·	<ul> <li>Addresses texturizing challenges by leveraging unique properties of various botanical sources</li> </ul>
	<ul> <li>Label-friendly options for mild to severe processes</li> </ul>
	Available in instant & cook-up
Native Cook-Up Starch	Label-friendly texture
Waxy Maize, Corn, Tapioca	<ul> <li>Contributes to moisture retention</li> </ul>
Cargill Gel® corn / waxy maize / tapioca starch	Improves texture & yield
CreamGel™ native tapioca starch	
Native Instant Starch	- Label-friendly texture
Cargill Gel Instant™ corn / waxy maize starch	Provides viscosity in cold process
Modified Cook-Up Starch	Delivers structure & stable emulsions
Waxy Maize, Corn, Tapioca	<ul> <li>Improves yields, texture with enhanced liquid absorption &amp; retention</li> </ul>
BatterCrisp®	Binds ingredients together
Cargill Set®	<ul> <li>Creates crisp batters for battered products &amp; coating systems</li> </ul>
Cargill Tex™	
EmTex®	
PolarTex™	
Modified Instant Starch	Provides viscosity in cold process
Waxy Maize, Corn, Tapioca	<ul> <li>Holds shape &amp; form in savory pastry fillings</li> </ul>
Cargill CreamTex®-Instant	
Cargill Tex-Instant™	The second second
PolarTex-Instant	
StabiTex-Instant™	

© 2024 Cargill, Incorporated. All rights reserved.

#### Texturizers & emulsifiers (cont'd.)

Product Type / Name(s)	Features & Benefits
CORN SYRUP SOLIDS & MALTODEXTRIN	
Cargill Dry® MD maltodextrin Cargill Dry™ GL corn syrup solids	<ul><li>Low relative sweetness</li><li>Adds bulk, body &amp; mouthfeel</li><li>Neutral taste</li></ul>
HYDROCOLLOIDS	
Aubygel® carrageenan Satiagel® carrageenan	<ul><li>Provides cold gelation</li><li>Retains moisture</li><li>Improves slice-ability</li></ul>
Satiaxane® xanthan gum	<ul><li>Thickening, suspension &amp; stabilizing agent</li><li>Adds function at very low amounts</li><li>Heat-stable</li></ul>
LECITHIN	
Emulpur™ deoiled soy lecithin Emultop™ deoiled canola lecithin Topcithin® fluid soy / sunflower lecithin	<ul> <li>Label-friendly, plant-based emulsifier</li> <li>Improves texture &amp; mouthfeel</li> <li>Stabilizes emulsions</li> <li>Extrusion aid; improves processing</li> <li>Offers good dispersibility in water</li> <li>Ensures uniform appearance</li> </ul>

## Sweeteners

Achieving the right sweet/savory balance is an important part of the meat alternative flavor experience. Cargill's integrated formulation resources give you the expertise and ingredients to make it irresistible.

Product Type / Name(s)	Features & Benefits
DEXTROSE	
<b>C-Dex™</b> <i>Monohydrate, Anhydrous</i>	<ul><li>Crystalline dextrose</li><li>Browning agent &amp; flavor enhancer</li></ul>

Cargill's industry-leading portfolio of ingredients also includes salt, cocoa, dietary fiber and more.



# We're committed to being your co-creation partner for success.



#### **Dedicated category expertise**

Leverage our category team's application expertise and market-driven insights to help you with solutions rooted in customer and consumer needs.



#### **Broad solutions portfolio**

Cargill's broad, industry-leading portfolio is uniquely positioned to provide solutions for enticing taste and texture, plus improved nutritional value, to delight consumers.



#### Innovating to new heights

Advanced R&D capabilities and an innovative eco-system enable us to anticipate and scale up new technologies, leading to the co-creation of winning meat alternatives.



#### **Differentiating through sustainability**

We're committed to creating new solutions that will feed the world more safely, responsibly and sustainably, helping customers like you differentiate with sustainability.



#### **Anchored by connections**

Cargill's global presence offers a powerful supply chain position and strategic partnerships to harness reliable sourcing at scale and advance your business goals.

Contact your Cargill representative or visit cargill.com/food-beverage/na/meat-alternatives

PURIS® pea protein is a trademark of PURIS Foods, a Cargill strategic partner.

Go!Drop® is a licensed trademark of Cubiq Foods S.L. Currently available for testing and R&D work.

#### SOURCES

- <sup>1</sup> World Resources Institute–2019 Report.
- <sup>2</sup> Euromonitor International. "Going Plant-Based: The Rise of Vegan and Vegetarian Food."
- <sup>3</sup> Innova Trends Survey, 2024-Global.
- Fortune Business Insights. "Meat Substitutes Market Size, Share & Industry Analysis." Sept. 2024.



