

# Solutions for snacks SUCCESS

Snacks & cereals solutions, Europe



## **Cargill, your partner** for co-creating growth in snacks & cereals applications

Leverage our passionate snacks & cereals experts with deep ingredient, application, and category knowledge. We are here to support you by developing and testing fully integrated solutions that deliver consumerpleasing snack and cereal solutions.

Our broad range of plant-based ingredients in our snacks & cereals portfolio is designed to inspire delicious protein bars, savory snacks, chips, ready to eat cereals and much more!



### **Insights-driven innovation:**

Complement your insights with our research into market trends and consumer needs to develop consumer-pleasing snack and cereal experiences



### **Broad solutions portfolio:**

Leverage our broad Cargill ingredient portfolio and our partnership to deliver fully integrated solutions



### **Enhanced expertise:**

Tap into reliable, knowledgeable, and highly skilled snacks & cereals experts and nearby state-of-the-art facilities





Advance your sustainability goals by leveraging our sustainability actions and commitments across the supply chain

### Trusted supplier:

Scale, grow and thrive thanks to global supply chains and alternative solutions to help manage vour costs

## We can help you find solutions for:

- ☑ Protein & snack bars
- ✓ Salty snacks
- ✓ Nuts & seeds
- $\ensuremath{\boxdot}$  Cereal: hot and ready to eat
- ✓ Pretzels
- ✓ Popcorn
- ✓ Fruit snacks
- **☑** Savory biscuits & crackers

## Ingredients in this document:

Texturizers	<b>→</b>
Sweeteners	<b>→</b>
Plant proteins	<b>→</b>
Fibers	<b>→</b>
Edible oils & fats	<b>→</b>
Cocoa & chocolate	<b>→</b>
Functional systems	<b>→</b>





## Texturizers

Second only to taste is sensory enjoyment. At Cargill, we couple our texture and emulsification solutions with our in-depth application and technical expertise, to help address your most challenging formulation needs. Whether you're rebuilding body and mouthfeel while reducing sugars or designing palate-pleasing textures, we offer a complete toolbox of solutions for culinary success.

Product Type/Name	Features & Benefits
Starch	
Functional Label- Friendly Starch	· Helps bring body and mouthfeel
Waxy Maize, Tapioca SimPure®	· Great cold storage stability
	· Smooth texture and neutral flavor profile
	· Fast and instant viscosity development
	· Available in instant & cook up versions
Native Cook-Up Starch	· Label-friendly
Maize, Waxy Maize, Wheat,Tapioca C☆Gel®, C☆CreamGel®	· Viscosity in immediately consumed products
Native Instant Starch	· Label-friendly
Maize, Waxy Maize C☆Gel <sup>®</sup> Instant,	· Viscosity in cold process
C☆HiForm®	14-

## SimPure<sup>®</sup>

SimPure® starches help address consumers' desire for simple ingredients and familiar labels, at the same time giving manufacturers greater process tolerance, shelf life and storage stability.

**Label-friendly** – naturederived, recognizable and simple ingredients

**Broad functionality** – suitable for a wide range of consumer products, thanks

to the broad portfolio with texturizing properties

Body & mouthfeel -

enhances the flavors and textures of everyday products





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Product Type/Name	Features & Benefits
Starch (continued)	
Modified Cook-Up Starch	Viscosity in hot process
Maize, Waxy Maize, Tapioca C☆Tex®, C☆PolarTex®, C☆CreamTex®, C☆BatterCrisp®, C☆DeliTex®	· Wide range of textures
	· Shelf life stability
	· Water-binding
	· Acid, heat & shear tolerance
C☆EmTex®, C☆EmCap®	Emulsification properties
	· Encapsulation
Modified Instant Starch	Viscosity in cold process
Maize, Waxy Maize, Tapioca C☆Tex <sup>®</sup> Instant, C☆PolarTex <sup>®</sup> Instant,	· Wide range of textures
C☆HiForm <sup>®</sup> , C☆PulpTex <sup>®</sup>	· Shelf life stability
	· Water-binding
	· Acid, heat & shear tolerance
	Thin-thick profile in UHT processes
C☆EmTex <sup>®</sup> , C☆EmCap <sup>®</sup>	Emulsification properties
	Encapsulation by spray drying
Dried Glucose & Maltodextrin	
Dried Glucose & Maltodextrin	· Body, mouthfeel, bulking agent
C☆Dry® MD, C☆Dry® A, C☆Dry® Light, C☆Dry® GL	Low relative sweetness
GADIY GE	Neutral taste
Pectin, Xanthan Gum	
Pectin	Label-friendly thickening and gelling agent
UniPECTINE <sup>®</sup>	· Stabilizes proteins
Xanthan Gum	· Thickening, suspension and stabilizing agent
Satiaxane®	· Can be applied effectively at very low dosage
	<ul> <li>Stability in acid conditions and under heat treatment</li> </ul>

Product Type/Name	Features & Benefits
Lecithin	
Fluid Lecithin	· Label-friendly emulsifier
Soy, Sunflower, Organic Soy Topcithin <sup>®</sup> , Leciprime <sup>®</sup> , Metarin <sup>®</sup> , Emulfluid <sup>®</sup>	Promotes even blending
·	Improves texture & mouthfeel
	· Increases shelf life
	· Reduces surface tension
	· Not a major allergen
	<ul> <li>Non GMO* and GMO available</li> </ul>
	<ul> <li>Available in different quality grades (Organic, FQ-MaxX infant, FQ-MaxX, Premium, Standard)</li> </ul>
	Source of choline
Deoiled Lecithin Soy, Sunflower and Rapeseed Metarin®, Emulpur®, Emultop® *There is no single definition of 'non-GMO'. Contact Cargill for source and processing information.	
	Cargill



## Sweeteners

Cargill offers one of the broadest sweetness portfolios, ranging from full- to no-calorie options, and high intensity sweeteners to offer choice to customers and consumers. Whether you are creating a new, full-sugar product or (re-) formulating for balanced nutrition, we offer a complete toolbox of solutions for sweet success.

#### Product Type/Name Features & Benefits

High-intensity sweeteners<sup>1</sup>

0 kcal/g, Enables sugar and calorie reduction/ replacement

#### Steviol glycosides from stevia

- Truvia<sup>®</sup>
   Can be used in synergy with bulking agents such as soluble fibers which can help to bring back bulk and mouthfeel when sugar is reduced
  - High Purity Reb A
  - · Cost-effective sugar reduction
  - · Clean, sweet taste
  - · Typically used in sugar-reduced sauces
- *ViaTech*<sup>®</sup> · Proprietary, synergistic blends of Steviol Glycosides designed for optimal taste and sweetness
  - · Clean taste allows for deeper sugar reduction
  - · Reduces bitterness and licorice off-notes

### Steviol glycosides from fermentation

- *EverSweet*®<sup>2</sup> · Advanced fermentation techniques bring to life stevia's sweetest elements – steviol glycosides Reb M and Reb D
  - Sugar reduction up to 8% SEV, with further reduction possible in combination with flavor modulators or other flavor enhancers like erythritol

## **Stevia**

Cargill's agricultural stevia program has been benchmarked at Silver level by Farm Sustainability Assessment (FSA) 3.0<sup>3</sup> – becoming the first stevia producer in the industry with our entire grower network evaluated that achieved this distinction.





A life cycle assessment (LCA) shows that EverSweet® advanced fermentation techniques result in improved environmental performance in key metrics such as carbon footprint, water use and land use impact compared to production from leaf or bioconversion, or traditional sugar.<sup>4</sup>

ViaTech



Cargill.com/ food-beverage/emea/ sweeteners/eversweet

1 Steviol glycosides and polyols are permitted in most energy or sugars reduced foods under "quantum satis" or under conditions of use. Foods with over 10% polyol content must carry a label "Excessive consumption may cause laxative effects" (EU Reg. 1333/2008 on food additives)

2 Product of Avansya, a joint venture between Cargill and dsm-firmenich. EverSweet® is already authorized for sale in the UK. It has also received a positive safety opinion from EFSA. Authorization for placing it on the market in the EU is expected at the beginning of 2025.

3 FSA is a standardized reference developed by SAI Platform, a food-industry organization dedicated to advancing sustainable agriculture in the food chain. It's designed to help producers assess their sustainable practices and support manufacturers in sourcing sustainably grown products. ISO/TS 19657:2017 (https://www.iso.org/news/ref2254.html)

4 LCA results have undergone a ISO14040/44 panel review, underlying report available upon request.



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Product Type/Name	Features & Benefits
Low- and no-calorie sweet 2.4 to 0 kcal/g, Bulk sweet	eeteners <sup>1</sup> eteners, Sugar and calorie reduction, Tooth-friendly
<b>Erythritol</b> Zerose®	· Sweetness and taste profile close to sucrose
	· Synergistic with high-intensity sweeteners, masks off-flavors
	· Adds smoothness and body
	· Zero calories
	· Good digestive tolerance
Sorbitol	· Milder relative sweetness
C☆Sorbidex <sup>®</sup>	· Cost-effective
	· Good humidity and moisture control properties
	· Balances and stabilizes plasticity and mouthfeel
Maltitol Maltidex®	· Similar sweetness, cooling effect and behavior to sucrose
	· Boosts fruity flavors
	· Good humidity and crystallization control
	· Higher viscosity leading to better processability
Full-calorie sweeteners	4 kcal/g, Bulk sweeteners
Glucose syrup	· Low to moderate relative sweetness
C☆Sweet <sup>®</sup>	· Medium to high viscosity, body and mouthfeel
	· Helps to adjust sugar recrystallization
Glucose-fructose	· Moderate to high relative sweetness
<b>syrup</b> C☆TruSweet®	Cost-effective sugar replacement
	Controlled browning & freezing point depression
Dextrose Cᠯ∡Dex®	High relative sweetness, typical sweet taste
	Flavor enhancement
	Monohydrate or anhydrous powder, variety of particle size distributions
	Quick energy release
	Good solubility



*Cargill* 

S. Europe 1 Steviol glycosides and polyols are permitted in most energy or sugars reduced foods under "quantum satis" or under conditions of use. Foods with over 10% polyol content must carry a label "Excessive consumption may cause laxative effects" (EU Reg. 1333/2008 on food additives)



## Plant proteins

Modern-day consumers have lofty expectations for their snacks & cereals. Not only must it taste great; increasingly, shoppers look to satisfy a complex array of goals around health and nutrition. Proteins are an important nutritional source supplying the body with essential amino acids that it cannot synthesize on its own. Beyond nutrition, these affordable, plant-sourced proteins provide many functional benefits, while their neutral taste profile makes them easy to incorporate in a variety of protein-enriched snacks & cereals.

### Product Type/Name Features & Benefits

Plant proteins	
Wheat Protein Vital wheat gluten & Hydrolyzed wheat protein <i>Gluvital®, Prowliz®</i>	Minimum 75% protein content
	· Protein enrichment
	· Unique texturizing properties
	· Mild taste profile
	· SAI FSA silver level
	<ul> <li>Provides firmness and cooking stability (in noodles)</li> </ul>
	<ul> <li>Offers film-forming and adhesive properties (in batters and breading)</li> </ul>
	Binds water and contributes to texture     (in meat analogues)
Pea Protein Isolates & Hydrolysates PURIS™ pea protein*, RadiPure®	· Minimum 80% protein content
	· Protein enrichment
	· Great functionality
	· Superior taste profile

## **Pea Protein**

### Versatile, functional, irresistible

Pea protein isolates are a high source of protein, produced from label-friendly yellow peas, which need no allergen declaration in Europe. Their nutritional value pairs well with broad functionalities:

Great solubility in neutral and acidic formulations

### Great water holding capacity

Cargill's extensive portfolio, deep application knowledge and technical expertise enables us to support food manufacturers in answering various plant-based formulation challenges.

Cargill.com/emea/pea-proteins







## Fibers

Many consumers struggle to reach the daily recommended fiber intake levels. That is why Cargill is offering fortification options that can help support consumers to close the fiber gap, but that can also offer functional benefits on top.

Product Type/Name	Features & Benefits
Fibers	
Citrus Fiber CitriPure®	<ul> <li>Supports fiber enrichment thanks to its intrinsic balanced mix of 40% soluble fiber and 60% insoluble fiber, enabling Nutri-Score improvement</li> </ul>
	$\cdot$ Can serve as a binding agent, reducing the need for sweeteners
	<ul> <li>Label-friendly: Nature-derived, simple and familiar ingredient based on citrus peel</li> </ul>
	<ul> <li>No chemical modication: Simply fully dried peel (nothing added, nothing taken away) produced with only water and energy; all the natural components of the citrus peel are kept intact</li> </ul>
Soluble corn and wheat fiber Cargill™ soluble fiber	<ul> <li>Supports fiber enrichment thanks to its high fiber content, enabling sugar &amp; calorie reduction and/or Nutri-Score improvement</li> </ul>
	· Low color and off-taste
	· Can offer improved stability, easy handling, and scalability

## CitriPure<sup>®</sup>

CitriPure<sup>®</sup> — a label-friendly citrus fiber obtained without chemical modification, providing nutritional properties and great texture enhancement.

**Label-friendly:** Nature-derived, simple and familiar ingredient based on citrus peel

Nutritional boost: Fiber enrichment thanks to its intrinsic balanced mix of 40% soluble fiber and 60% insoluble fiber, enabling Nutri-Score improvement No chemical modification:

Simply fully dried peel (nothing added, nothing taken away) produced with only water and energy. Natural components are not materially impacted

Cargill.com/emea/ citrus-fiber





## Edible oils & fats

Rely on us to help you create quality snacks & cereals with our broad range of liquid oils, tropical fat oils and extensive refining, blending and modifying facilities across Europe. Helping with flavor enhancement, texture and structure development, our fats and oils make your snack and cereal solutions enticing to consumers.

We have the broadest portfolio of oils and fats around the globe. Our global sourcing capabilities and in-depth control of the supply chain allow us to source high-quality raw materials tailored to the specifications of all our customers.

Product Type/Name	Features & Benefits
Oils	
Edible oils	<ul> <li>Our base oils are rapeseed, (HO) sunflower as well as specialized oils e.g. linseed, groundnut, coconut and palm kernel oil and blends</li> </ul>
Fats	
<b>Filling fats</b> CremoFLEX®	<ul> <li>This customizable range of premium filling fats can be tailored to suit different specific formulation needs, including the use of RSPO certified palm solutions</li> </ul>
	Can be used in several snacking applications





## Cocoa & chocolate

Cargill's global portfolio of quality cocoa and chocolate ingredients can help you create delicious snack and cereal products.

Product Type/Name	Features & Benefits
Cocoa powder	
Gerkens <sup>®</sup> range of cocoa powders	<ul> <li>High-quality cocoa powders for consistently vivid color and delicious taste</li> </ul>
Chocolate	

A variety of standard and specialty chocolates for sensory excitement and on-trend claims

- · ExtraVeganZa vegan chocolate
- · Bright White chocolate
- Organic chocolate
- $\cdot$  Sugar-reduced chocolate
- · Single origin dark chocolates
- · Inclusions: toppings and decorations



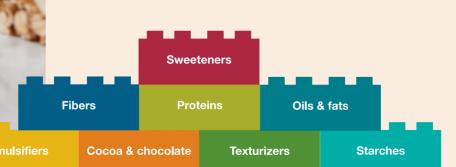
Snacks & cereals solutions, Europe



## INFUSE by Cargill™ Functional Systems

Blended ingredient solutions for winning on-trend products

Under our INFUSE by Cargill<sup>™</sup> service offering we provide blended solutions to help fast forward your product development. We bring together Cargill's extensive ingredient portfolio and our 50+ years' experience in blending functional solutions. We can tailor the exact solution to your needs. Explore some of our building blocks for your product development:



### Product Type/Name Fea

Features & Benefits

#### **Functional plant-based ingredient solutions**

Trilisse <sup>®</sup> MM 500	· Blended solutions of pea protein and
Cereal bars	wheat protein – pea protein is one of the
Trilisse <sup>®</sup> MM 502	most healthily perceived plant-based
Protein bars	proteins by consumers*
	<ul> <li>High protein claim</li> </ul>

- · Good texture, bite and chewability
- · Non-drying, gritty mouthfeel
- · Suitable for vegans & vegetarians
- Robust, versatile solution for a wide variety of products
- · Water binding properties

\* Source: Cargill IngredienTracker™ EMEA 2022







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