Co-create tomorrow's winning dairy products with Cargill's dairy solutions

Solutions offering for Europe



Our secrets to your dairy success



Insights-driven Innovation

Translate
emerging dairy
trends into
winning
concepts that
create a
competitive
advantage



Enhanced **Expertise**

Leverage our endto-end commercialization support to help identify, prototype, test and scale up new products



Broad **Solutions**Portfolio

Bring your dairy applications to life through our unparalleled portfolio and application capabilities



Advancing **Sustainability**

Grow by
differentiating
through
sustainability at
scale and help
communities and
the world thrive



TrustedSupplier

Get peace of mind through our global supply chain expertise, ensuring safe products, priced right, delivered on time We have a broad portfolio of high-quality ingredients for dairy...

Texturizers

- Label-friendly, native & modified starch
- Dried glucose
- Maltodextrin
- Xanthan gum
- Carrageenan
- Pectin
- · Seaweed powder
- Lecithin

Edible oils & fats

- Liquids
- Laurics
- Fats
- Tailor-made solutions and blends

INFUSE by Cargill™ Functional Systems

 Functional ingredient blends that can help technical and operational challenges

Fibers

- · Soluble fiber
- · Citrus fiber

Plant proteins

- Pea protein isolates
- · Hydrolyzed wheat protein

Sweeteners

- Glucose and Glucosefructose syrups
- Dextrose
- Erythritol
- Stevia

Cocoa & chocolate

- Chocolate
- Cocoa powder
- Coatings & fillings
- Confectionery alternative to chocolate

Decorations & inclusions



Texturizers



Texturizers make or break consumer acceptance. Beyond structure and texture, texturizers also contribute to many aspects of the **sensory experience** (appearance, taste, mouthfeel).

At Cargill, we couple our texture and emulsification solutions with our in-depth application and technical expertise, to address your most challenging formulation needs, and to deliver the palate-pleasing textures that keep your customers coming back for more.

Product Type/Name	Features & Benefits	Applications
Starch		
Functional Label-Friendly Starch: Maize, Tapioca SimPure®	 Label-friendly Solutions for viscosity, thickening, creaminess or gelling with improved water-binding and flavor release 	Fermented dairy, desserts, creams, dry mixes
Native Cook-Up Starch: Maize, Wheat, Tapioca C☆Gel®	Label-friendlyGood gellingProvides firm textureLimited stability over shelf life	Processed & analog cheese, gelled desserts
Native Instant Starch: Maize, Waxy Maize C☆Gel® Instant, C☆HiForm®	Label-friendly Viscosity in cold process	For instant and cold prepared products
Modified Cook-Up Starch: Maize, Tapioca C☆Tex®, C☆PolarTex®, C☆CreamTex®	Wide range of texturesShelf life stabilityWater-bindingAcid, heat & shear tolerance	Fermented dairy, desserts, creams, processed & analog cheese
C☆Stretch	· Excellent gelling properties	
Modified Instant Starch: Maize, Tapioca C☆Tex® Instant, C☆PolarTex® Instant, C☆HiForm®	Viscosity in cold processWide range of texturesShelf life stabilityWater-binding	For instant and cold prepared products

· Acid, heat & shear tolerance



SimPure® starch helps address consumer desire for simplicity and familiarity, while giving manufacturers greater process tolerance, shelf life and storage stability versus their native counterparts.

- Label-friendly naturederived, familiar ingredient, labeled as starch
- Broad functionality viscosity, thickening, creaminess or gelling
- Body & mouthfeel enhances the flavor and texture of dairy products

Cargill.com/emea/ simpure





Product Type/Name	Features & Benefits	Applications
Dried Glucose & Maltodextrin		
Dried glucose & Maltodextrin C☆Dry® MD, C☆Dry® Light, C☆Dry® GL, C☆NutriDry	Body, mouthfeel, bulking agentLow relative sweetnessNeutral taste	(Plant-based) frozen desserts, flavored dairy and cocoa drinks, (plant-based alternatives to) yogurts, cheeses and creams
Pectin, Carrageenan, Xanthan Gum		
Pectin UniPECTINE®	 Label-friendly thickening and gelling agent Stabilizes proteins in acidic conditions 	Yogurts, processed cheese, acid dairy drinks, creams, frozen desserts, plant-based alternatives to yogurts, fermented creams, plant-based acid dairy drinks
Carrageenan Satiagel®, Satiagum®, Aubygel®	 Acts as a thickening and gelling agent Suspends and stabilizes fat, protein and cocoa particles Improves mouthfeel 	(Plant-based) desserts, dairy drinks, plant-based alternatives to cheeses
Xanthan Gum Satiaxane®	 Thickening, suspension and stabilizing agent Can be applied effectively at very low dosage Stability in acid conditions and under heat treatment 	Frozen desserts, plant-based desserts, plant-based alternative to cheeses
Seaweed Powder		
Seaweed Powder WavePure®	 Label-friendly Very limited color and flavor deviation, formulation and process versatility Brings great body and mouthfeel 	Dairy desserts, drinks
Lecithin		
Fluid Lecithin: Soy, Sunflower, Organic Soy Topcithin®, Leciprime®, Metarin® Deoiled Lecithin: Soy, Sunflower and Rapeseed Metarin®, Emulpur®, Emultop®	 Label-friendly emulsifier Stabilizes emulsions and foams Reduces surface tension Non-GMO* and GMO available Not a major allergen Available in different quality grades (Organic, FQ-MaxX infant, FQ-MaxX, Premium, Standard) 	Dairy creams, plant-based alternatives to dairy drinks and plant-based alternatives to cheeses



WavePure® is a seaweed powder range based on native seaweed obtained without any chemical modification. It's a unique ingredient with great mouthfeel properties that enables smooth and creamy textures, in desserts and dairy drinks.

- · **Label-friendly** nature-derived, simple and familiar plant-based ingredient, based on seaweed
- · Consistent quality very limited color and flavor variation
- No chemical modification whole, not-transformed seaweed; all the natural components of the seaweed are kept intact

Cargill.com/food-bev/emea/texturizers/ seaweed-powder



 $^{^{\}star}$ There is no single definition of "non-GMO". Contact Cargill for source and processing information.



Fats & oils



Vegetable oils & fats are essential in the creation of alternatives to dairy that deliver on sensory appeal. Finding the right mix is key to enabling optimal texture and organoleptic properties, and an improved nutritional profile. Our oils & fats portfolio for alternatives to dairy is in line with key trends around health, sustainability, label-friendliness, without compromising on sensorial properties that consumers expect.

Product Type/Name	Applications		Features & Benefits
	Dairy Alternatives	Dairy	
Liquids Sunflower, Rapeseed, Linseed, Corn, Soy	Plant-based alternatives to dairy drinks and desserts	Dairy desserts	 Low in saturated and high in mono- and polyunsaturated fatty acids Bring excellent sensorial properties. Solutions for various nutritional profile
Laurics Coconut, Palm kernel	Plant-based alternative to cheese, plant-based alternative to creams and recombined creams	_	 Fully hydrogenated available Ensure high oxidative stability for long shelf life Bring excellent sensorial properties and flavor release For extra white colour experience
Fats Palm-based solutions Fat-based milk powders	Plant based alternative to cheeses and creams, plant- based desserts, plant-based alternative to flavored dairy and cocoa drinks	Coffee whiteners and yogurt-based drinks	 Provide excellent structural properties Deliver the desired texture and mouthfeel Ensure high oxidative stability for long shelf life
Blends Palm alternatives based on cocoa butter and/or liquid oils			 Provide excellent structural properties Achieve desired texture and mouthfeel Reduced saturated fatty acids



Functional systems

INFUSE by Cargill™

Functional systems

Dairy remains one of the most innovative and trend-driven application areas within the food & beverage industry. Due to the complexity of the food matrixes involved, dairy products heavily rely on synergies between ingredients for optimal performance. This lends the category particularly well to functional systems.

INFUSE by Cargill™ functional systems & design offers tailormade solutions, where we combine several ingredients together in an optimal blend. Whether you are looking for a label-friendly stabilizer, texture improvement, prolonged shelf-life, or replacing a certain animal protein with plant-based proteins, our experts can help offer the best solution for your specific needs.





rilisse® AYS 0688 olution of Corn Starch and Pectin	 Label-friendly ingredients with positive consumer perception Used to stabilize yogurt and compensate the functionality of dairy proteins in plant-based alternatives Helps to deliver indulgent mouthfeel and great overall texture Helps to improve smoothness and shiny appearanceµ Limits syneresis during shelf life 	(Plant-based alternatives to) yogurt
ygomme® AYS 6722* olution of Modified Starch and Pectin	 Helps to improve smoothness and shiny appearance Limits syneresis during shelf life Indulgent, thick and creamy texture improved process resistance Addition before fermentation 	(Plant-based alternatives) to) yogurt
rilisse® AMP 820 DF olution of: Starches	 Label-friendly Helps to bind the water and brings viscosity Develops indulgent sensory mouthfeel and shininess Avoids syneresis during shelf life 	(Plant-based alternatives to) yogurt, (plant-based) dessert
ygomme® ADF 3939 DF olution of Modified starch, Sucrose, Carrageenan and sunflower oil	 Helps to improves smoothness and shiny appearance Limits syneresis during shelf life Helps to deliver indulgent mouthfeel Process resistant 	(Plant-based) desserts
Clanogen® ADF 53 olution of Carrageenan and Guar gum	 Suitable for various textures from pourable custard to thick slightly gelified dessert creams Indulgent creamy mouthfeel 	(Plant-based) creamy desserts
Clanogen® ADG 550 olution of Carrageenan, Locust bean gum and extrose	 Delivers a demoldable and gelified texture Indulgent spoonable texture, with a creamy consistency 	(Plant-based) hot-filled desserts
ygomme [®] ABN 622 R olution of: Mono & diglycerides of fatty acids, arrageenan and Guar Gum	 Helps to create a stable emulsion in order to avoid creaming effect and particles sedimentation Enables sensorial smoothness improvement Easy dispersion Flexible dosages 	(Plant-based alternatives to) dairy drinks
ygomme® ABN 829 olution of Microcrystalline cellulose, Cellulose oum and Gellan Gum	 Helps to create a stable emulsion in order to avoid creaming effect and particles sedimentation Enables sensorial smoothness improvement 	(Plant-based alternatives to) dairy drinks



Functional systems solutions in action



Grilled cheese that maintains its shape

ACH 830: a blend of modified and native maize starches and guar gum that prevents the cheese alternative from melting and helps it maintain its shape when exposed to hot temperatures.



Chocolate powder that disperses into milk without sedimentation

Lygomme ABN 622 R: an integrated mix of emulsifier and hydrocolloids that stabilizes and improves mouthfeel in flavored or chocolate milk drinks.



Hybrid alternative to yogurt that delivers on creaminess

Trilisse AYS 0688: a label-friendly blend of corn starch and pectin that stabilizes the yogurt and compensates the functionality of the dairy proteins in terms of mouthfeel and texture, shiny appearance and limiting syneresis during shelf life.



Chocolate mousse that is foamy and textured

Lygomme ADM series: fulfills a triple role in this recipe (aerating, thickening and stabilizing), to ensure the whipping properties are improved and shelf life stability is assured.



Fibers



As consumers embrace a more proactive and preventative approach towards health, their attitudes are increasingly reflected in their food and beverage choices hence fiber is rising in popularity. Cargill's fibers are fully in line with today's trends towards sugar and calorie reduction, fiber enrichment, and label-friendliness.

Product Type/Name	Features & Benefits	Applications
Fibers		
Soluble corn fiber Cargill™ soluble fiber	 Label-friendly Enables 'High in fiber' 'Source of fiber' claims Enables minimum 30% sugar reduction Calorie reduction Nutri-Score improvement 	(Plant-based alternative to) dairy drinks, desserts, (plant-based alternatives to) yogurts, plant-based alternatives to cheese



Plant proteins



In food, 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 functional benefits makes them easy to incorporate into a variety of food and beverage products. We can help food & beverage manufacturers match protein choices to brand goals, resulting in a new generation

of products that meet the diverse needs and desires of today's more discerning consumer.

Product Type/Name	Features & Benefits	Applications
Plant proteins		
Pea Protein Isolates & Hydrolysates	Min. 80% protein contentGreat functionalitySuperior taste profiles	Plant-based alternative to yogurts, cheeses, creams, plant-based flavored and cocoa drinks
Wheat Protein Hydrolyzed wheat protein Prowliz®	 Highly digestible Robust protein content (Protein (Nx5.7) on dry basis: 76.5% min.) Low viscosity Good solubility 	

Pea Protein

Versatile, functional, irresistible

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

- Good solubility and stability at different pH
- · Mild flavor versus other pea proteins
- · Great emulsification and whipping properties
- Texturizing properties: smooth, creamy and spoonable texture
- Excellent water holding capacity avoids staling during shelf life

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



Sweeteners

Cargill offers one of the broadest sweetness portfolios, ranging from full to no calorie options, to offer choice to customers and consumers. Whether you're creating an entirely new product or formulating for balanced nutrition, Cargill's broad range of nature-derived sweetness solutions can help you for sweet success.



Product Type/Name Features & Benefits

High intensity sweeteners 1

(0 kcal/g, Sugar and calorie reduction, Sweetness adjustment)

Steviol glycosides from stevia

Truvia®	· High Purity Reb A
	0 . " .:

· Cost-effective sugar reduction

· Clean, sweet taste

ViaTech®

- 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® 2

- 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

Applications:

(Plant-based) frozen, neutral and fermented desserts, (plant-based alternative to) flavored dairy and cocoa drinks

Stevia

Cargill's agricultural stevia program has been benchmarked at Silver level by Farm Sustainability Assessment (FSA) 3.0³ – becoming the first stevia producer in the industry with our entire grower network evaluated that achieved this distinction.



Cargill.com/sustainability/sustainable-stevia







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.⁴

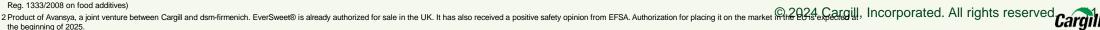
EverSweet®

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

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

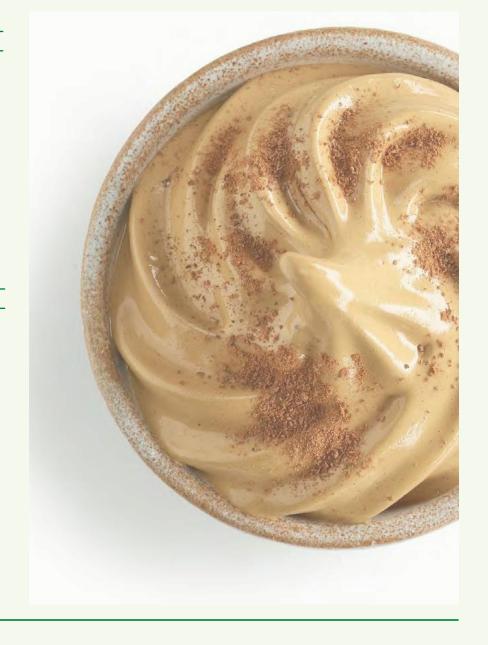


¹ Steviol glycosides and polyols are permitted in most energy or sugars reduced foods under "quantum satis" or under conditions of use. Foods with over 10% polyol content must carry a label "Excessive consumption may cause laxative effects" (EU Reg. 1333/2008 on food additives)



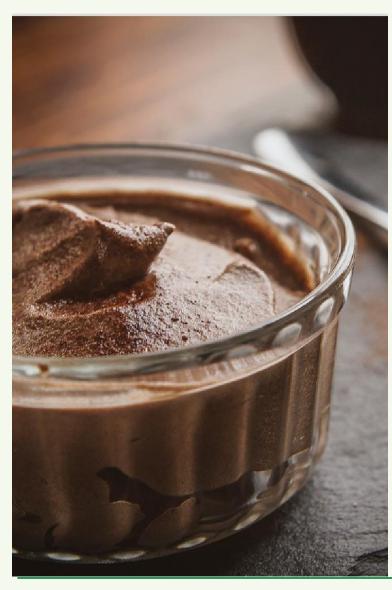
Product Type/Name	Features & Benefits	Applications
Full-calorie sweeteners (4 kca	I/g, Bulk sweeteners)	
Glucose syrups C☆Sweet®	 Low to moderate relative sweetness Medium to high viscosity, body and mouthfeel Helps to adjust sugar recrystallization 	(Plant-based) frozen desserts
Glucose-fructose syrup C☆TruSweet®	 Moderate to high relative sweetness Cost-effective sugar replacement Controlled browning & freezing point depression 	_
Fructose syrup C☆TruSweet® 01795	 High relative sweetness enabling up to 30% sugar and calorie reduction, and more in combination with high intensity sweeteners Enhances freshness and boosts fruity flavors 	_
Dextrose C☆Dex®	 High relative sweetness, typical sweet taste Flavor enhancement Quick energy release Good solubility Monohydrate or anhydrous powder, variety of particle size distributions 	
-	2.4 kcal/g- 0 kcal/g, Bulk sweeteners, Sugar and calorie reduction, Tooth-friendly	/)
Maltidex®	Similar sweetness, cooling effect and behavior to sucrose Boosts fruity flavors	(Plant-based) frozen, neutral and fermented desserts, (plant-based alternative to) flavored dairy and cocoa drinks
Sorbitol	· Milder relative sweetness	
C☆Sorbidex®	· Cost-effective	
Erythritol 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 	

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)





Cocoa & chocolate



From bean to bar, Cargill's global portfolio of high-quality cocoa and chocolate ingredients can help you create delicious dairy & dairy alternatives applications.

Product Type/Name	Features & Benefits	Applications
Chocolate		
Standard Milk, dark, white	 Liquid & solid solutions Capability to produce chocolate recipes that comply with vegan certification Available with sustainable certification 	(Plant-based alternative to) desserts and dairy drinks
Caramel Selection	White chocolate with caramelized ingredients Clean label- flavored with natural caramelized ingredients Four color & flavor profiles	
Organic	 Organic claim chocolate Sourced from organic origins across the globe to limit local influences on supply stability Blended from different origins to ensure consistent flavor profiles 	
ExtraVeganZa Vegan chocolate decorations & inclusions	 Sensorily outstanding vegan chocolate range with lighter color profile and vegan claim Based on sunflower syrup or rice syrup Available from 'suitable for vegan' to 'vegan with no detectable levels of dairy'* 	
Cocoa powder		
Gerkens® cocoa	 A broad range of high-quality cocoa powders suitable for a variety of applications Two new, 30% sugar reduced cocoa powders, in a natural way (without adding any sweeteners or artificial ingredients) Available with a sustainable certification Available in organic 	
ExtraVeganZa	Two specialty cocoa powders to enhance the sensory appeal of plant-based alternatives to dairy drinks	
Coatings and fillings		
Customized plant-based compounds	 Made with plant-based ingredients for recipes that are also suitable for vegans No limit on dairy traces is offered* Dedicated 'No nut' production line Available with a sustainable certification 	



Tap into our dairy expertise

Our excellent applications support is guaranteed from our Dairy/Dairy Alt Innovation Centers in Vilvoorde (BE) and Baupte (FR), where we can conduct co-creation trials with you.

- Advanced research, development
 & technical expertise
- Fully equipped pilot plant and control /characterization labs
- Comprehensive sensory, application and pilot testing
- Rapid delivery of concepts, prototypes and formulations
- Nutrition, regulatory support





