



Solutions for healthy pets and happy pet parents

**Cargill's Food Solutions –
Ingredients for Pet Food**



Cargill, your partner for co-creating growth in Pet Food, Treats & Supplements

Leverage our passionate experts with deep ingredients, application, and category knowledge. We are here to enable you to create nutritious and healthy dry and wet pet foods, treats and supplement solutions that please pets and their parents.



Our secrets to your success:



Insights-driven innovation:

Complement your insights with our research into market trends and consumers to help meet evolving consumer needs.



Broad solutions portfolio:

Leverage our unparalleled portfolio of essential ingredients and blended solutions to deliver the textural, shelf-life and processability benefits to help scale and speed up your development.



Enhanced expertise:

Tap into our technical and product experts to identify the best solution for your product development and formulation challenges.



Accelerated sustainability:

Leverage our sustainability actions and commitments across the supply chain to support your sustainability goals.



Trusted supplier:

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

We can help you find solutions for:

- ✓ Wet pet foods – Meat chunks & pâtés
- ✓ Wet pet foods – Sauces
- ✓ Wet pet foods – Covering sauces
- ✓ Dry pet foods
- ✓ Treats & Supplements



Ingredients in this document:

Plant proteins



Fats and oils



Texturizers



Functional systems



Fibers



Sweeteners



Postbiotics & pet premixes





Plant proteins

Plant proteins — supplying amino acids, vitamins, and minerals — are a strategic component of pet foods to ensure balanced nutrition, technological function (e.g., texturization), and cost optimization. Beyond nutrition, these affordable, plant-sourced ingredients provide many functional benefits, while their neutral taste profile makes them easy to incorporate in a variety of formulations. Cargill is increasing its offer of plant-based proteins to cater to the growing need for plant-based and hybrid solutions.

Product type	Features & Benefits
Vital Wheat Gluten GluVital® 21040, 21060, C*Propell® 21080 (pelletized)	<ul style="list-style-type: none"> · Enables protein enrichment · Min 75% protein content – used to compose high protein formulas
Hydrolyzed Wheat Protein C*HyProW® 21100	<ul style="list-style-type: none"> · High digestibility · Specific texturizing, binding and expansion properties
Pea protein Radipure® S8001B S8001E	<ul style="list-style-type: none"> · Enables protein enrichment · Min 80% protein content · Texturizing and binding properties
Corn Gluten Meal Cargill® 13850, 13851, 13860, 13781	<ul style="list-style-type: none"> · Enables protein enrichment · High digestibility · GMO-free · Variety of parameters can be tailored

GluVital® Vital Wheat Gluten

GluVital® Vital Wheat Gluten can provide a combination of functional and nutritional characteristics, making it a solution of choice especially for wet pet food. Yet it also brings benefits to dry food and treats.

It has a rich amino acid profile: e.g., high amounts of glutamine, leucine, and tryptophan, among others. It is free of anti-nutritional factors (ANF), and importantly has a low mineral content which helps to keep the diet below its maximum ash levels. It can contribute to good feces quality and should not impact palatability.

Functionality-wise, GluVital brings great binding properties, such as

- Improving chunk texture and bringing structure to the meat ropes
- Enhances kibble structure in dry food; and
- Improving the dough quality and reduce breakage risk in baked biscuit treats

It can also partially replace animal plasma, used for binding properties in chunk recipes, hence it could save costs.





Fats and oils

Vegetable oils & fats can be a great alternative to animal-based options. Cargill is the perfect partner to help you succeed within this marketplace, as we offer a wide range of fats and oils. Our global sourcing capabilities and in-depth control of the supply chain allow us to source high-quality raw materials tailored to your specifications.

Our portfolio of vegetable options such as sunflower, rapeseed, soybean and corn, are rich in unsaturated fat and/or omega-6 fatty acids and may help in claims for skin and coat health. We can tailor the composition to your exact needs and help mimic the animal-based options.

Next to that we also have more saturated options and price sensitive options such as palm oil. Or, for specific reasons the lauric fats; coconut oil and palm kernel oil, rich in medium-chain fatty acids.

Our blends can enable the optimal mix to help your products stand out in terms of taste, texture, and visual appeal.

Have you ever experienced your packaging to contain some oil that leaked from the pellets? That means it is time to learn more about our anti-seepage solutions! Our Cargill representatives are at your service to help you find your optimal solution.

Product type/name	Features & Benefits
Liquid Vegetable Oils	· Sunflower, Rapeseed, Linseed, Groundnut
Lauric Fats	· Coconut / Palm kernel, Fully hydrogenated available
Fats	· Palm-based solutions
Blends or specialties	· Palm alternatives based on cocoa butter and/or liquid oils
Antiseepage fats	· Fully hydrogenated oils based on palm (PA58) or rapeseed (RS70)





Texturizers

Starches from wheat, corn and tapioca

Texturizers impact various aspects and appearance of the end products. They help to enhance the texture and mouthfeel and play a vital role in manufacturing by focusing on improving consistency, stability, and cost-effectiveness.

Moreover, they may enable manufacturers to create new and innovative products that meet changing preferences and expectations.

Cargill offers a wide range of texturizers to meet various needs depending on the type of dry or wet food products and processing parameters.



Product type/name	Features & Benefits
Modified Starch Wide range of instant and cook up starches such as C*Tex® Instant and C*PolarTex®	<ul style="list-style-type: none"> · Source of nutrients · Helps bring texture and viscosity in wet pet food and treats · Enables gravy texture and chunks coating · Enhances creaminess, gelling and shininess · Binding properties · Good cold storage stability
Functional, Label-friendly Starch SimPure®	<ul style="list-style-type: none"> · Source of nutrients · Helps to bring body, texture and viscosity · Binding properties · Good storage stability in different conditions
Native Starch Wide range of native starches for less harsh processing conditions such as C*Gel®	<ul style="list-style-type: none"> · Source of nutrients · Helps with gelling, thickening and viscosity building · Binding properties · Kibble expansion, influencing density and porosity control · Improves extrusion process and structure of dry pet food
Maltodextrin & Dried Glucose C*Dry® MD, C*Dry® GL	<ul style="list-style-type: none"> · Source of nutrients · Improves texture · Good bulking agent · Enhances shelf life stability

Why is starch essential to any recipe?



Texture

Starch is a crucial component for modifying and improving the texture of pet food. It is commonly used as a thickener and a viscosifier. It can help with moisture retention and contribute to crispiness.



Taste

Starch enhances the sensory experience by providing texture it can help bring more mouthfeel to the overall taste experience.



Shelf-life

Starch can significantly improve the shelf-life thanks to its stabilization capabilities that will prevent ingredients' separation and thanks to its moisture and retrogradation control which help maintain freshness for longer.



Processability

Starch improves the processability, making them easier to manufacture and handle.



Consistency

Starches help to achieve consistent texture and viscosity, ensuring the same quality for each production batch.

Cargill has an extensive portfolio of starch solutions, based on corn, waxy corn, and tapioca, to meet the needs of your specific recipes and production processes.



Modified starches are a recommended thickener and stabilizer in wet pet food, due to the severe thermal treatment applied. They are used to enable gravy texture and chunks coating. The level of starch modification will depend on the sterilization process (time/temperature) and the desired texture outcome.

Pre-gel starches based on maize and/or waxy maize offer benefits in dry and wet pet food and pet treats, such as

- C*Gel® Instant
- C*Tex® Instant
- C*PolarTex® Instant

In Wet Pet Food: Delivers proper viscosity to gravies to be filled inside the pouch, tray or can, allowing for a more accurate and clean dosing. It can replace guar gum for the same function.

In Treats: Delivers binding properties for cold processing or during processing where cooking is not enough to cook all the ingredients. It enables stable processing and improves final appearance.

Cook up starches based on waxy maize or tapioca, are also beneficial in wet pet food, specifically in the gravy, to build proper viscosity after passing through the retort processing.

Especially C*CreamTex® 75710 based on tapioca is a popular choice as it enables grain-free formulation and claims. The taste is more neutral and the texture creamier versus other solutions.



Texturizers

Carrageenan, Seaweed Powder and Xanthan Gum

Carrageenan are water soluble polysaccharides extracted from red seaweeds with thickening, stabilizing and gelling properties. In pet food it is often added in small amounts to loaf (pâté) type and chunks of wet pet food to create a firm consistency.

Carrageenan type choice and level depend on texture needs, gelling aspect, and processing (filling temperature, to avoid early gelation). Typically, kappa (semi-refined carrageenan or refined gel press carrageenan) carrageenan is used because of gelation properties, and the synergy with proteins (e.g., gelatin).

Most carrageenan fractions are solubilized by the sterilization step and deliver a strong and brittle gel. A more elastic texture can be created when carrageenan is used in synergy with gums, which are less prone to syneresis.

Product type/name	Features & Benefits
Carrageenan Aubygel® TPF 43 DF, Aybygel® Pate 0	<ul style="list-style-type: none"> · Can deliver unique gelling and texturizer properties · Creates strong and brittle gel · Acts as a binder in chunks and loaf products · Thermo-reversible · Acid sensitivity · Presence of syneresis · Synergy with proteins · Synergy with gums (locust bean and cassia), creating a more elastic gel
Seaweed Powder WavePure®	<ul style="list-style-type: none"> · Seaweed Powder
Xanthan Gum Satiaxane™ CX 910 PF	<ul style="list-style-type: none"> · Cold dispersible, hot or cold processable · Helps to stabilize emulsions and suspensions · High resistance to acid, heat treatment, and salt tolerant · Excellent freeze / thaw stability · High viscosity in hot conditions



Aubygel® TPF 43 DF

Aubygel® TPF 43 DF is a mix of semirefined kappa carrageenan (Processed Eucheuma Seaweed or PES) and refined kappa carrageenan. Semi-refined fractions are more cost-efficient yet can have a slightly darker color. In mixing with refined carrageenan the color can be balanced, as refined carrageenan is more shiny/ transparent. We can also provide pet food grade versions of our standard food Carrageenan range.

Satiaxane™

Xanthan gum is a nature-derived polysaccharide produced through the aerobic fermentation of sugars. Xanthan Gum is a cost-efficient, thermo-reversible thickener that is used in pet food to help provide especially cold viscosity. It is also synergistic with gums (locust bean and cassia), as they can form a softer, more elastic gel together.

WavePure®

WavePure can be declared as a seaweed powder. It undergoes no chemical processing: it is whole, not transformed seaweed. All the natural components of the seaweed are almost kept intact.

It is high in essential vitamins and minerals, rich in fiber and is low-calorie. WavePure helps to bring stability, improves mouthfeel, and can deliver gelling properties.

We can also provide pet food grade versions of our WavePure®, label-friendly solution.





Texturizers

Lecithin

Lecithin is a plant-derived, versatile ingredient that is suitable for a wide range of applications for pets such as dogs, cats, aquatic species and more.

Lecithin offers enhanced emulsification and dispersion, enabling also other functionalities such as:

- Reducing dust
- Aiding wettability
- Enhancing structure

Lecithin is also a source of energy and naturally rich in choline. Studies indicate that pet foods containing lecithin can help support immune and digestive systems and the health of coat and skin.

Cargill extracts and standardizes lecithin from plants, available in soy, sunflower and rapeseed, and offers various formats.

Product type/name

Features & Benefits

Fluid Lecithin Nutripur™ & Emulbesto™

- Provides emulsification
- Helps to bind ingredients
- Improves powder dispersibility
- Less storage sensitive
- Easily soluble in oil/fat
- Provides direct dosing for automated systems

De-oiled Lecithin Nutripur™ & Emulbesto™

- Same functionality as fluid with higher phospholipid concentration brings nutritional benefits (source of natural choline)
- More neutral flavor and color (vs fluid)
- In powder or granule form in user-friendly packaging
- Highly concentrated/lower dosage required

On-carrier Lecithin

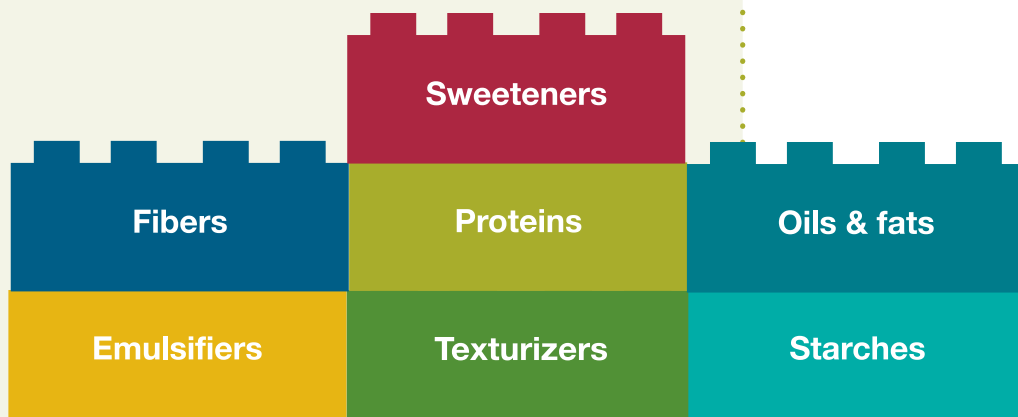
- Can provide better dispersion of active ingredients
- Can act as a stabilizer to prevent separation of ingredients

De-oiled lecithin

De-oiled lecithin products are free of residual vegetable oil, providing concentrated phospholipids for enhanced dispersion in water and easier handling. Neutral in both color and flavor, their improved functionality makes them a popular choice for a wide range of applications. Cargill's de-oiled lecithin is available in both granular and powder forms.

Functional Systems

Functional systems are uniquely blended ingredient solutions that are synergistic in their functionality beyond what the individual ingredients can do. They offer ease of handling and can help to simplify and speed up product development. Tailored solutions can be developed to ensure the blend meets your specific needs.



INFUSE by Cargill

In wet pet food, INFUSE by Cargill functional systems are used for **texturizing and stabilizing**. Most blends would be composed of polysaccharides (such as starch and/ or hydrocolloids), proteins, or emulsifiers with buffer salts or other standardizing agents. Our blends never include flavors, spices, or colorants.

Flanogen®

Flanogen® TPF blends bring gelling properties to gravies and jellies in wet food, enabling soft to strong gel creation, depending on the combinations used. Most blends leverage the synergies of starch, carrageenan (or Processed Euchema Seaweeds), and galactomannans, enhanced by buffer salts.

The TPF 4219 e.g., can be used in pâtés for cold viscosity, delivering great cohesiveness and medium firmness.

Further tailoring can be done basis recipes and processing conditions, to adjust viscosity, texture, transparency, gel strength, cost etc. Cassia-free and dextrose-free blends are also available for label-friendly and palatability requirements.

Lygomme®

Lygomme® TFE range are blends consisting of guar and xanthan gum, which deliver specific viscosity properties in sauces in wet pet food.

Emulthin™

Emulthin™ blends include spray-cooled lecithin-on-carrier systems (TPF & TFE ranges), blends of de-oiled lecithin with anti-caking agents (TAF range) that provide easy dispersion, emulsification, and stabilization. On top of that, they may deliver cost-efficiencies.



Fibers

Fortification is an obvious trend in various food & beverages across Europe. Cargill's fibers are fully in line with today's trends towards fiber enrichment, and label-friendliness.

Product type/name

Features & Benefits

Pectin & Citrus Fiber

UniPECTINE® pectin, CitriPure® citrus fiber

- Moisture retention
- Texture enhancement
- Improves formability and processing

Soluble Fiber

Cargill™ Soluble fiber (liquid, based on wheat or corn)

- Bulking agent
- Popular in sugar-reduced recipes
- Can offer improved stability, easy handling, and scalability



Cargill™ Soluble fiber

Cargill™ Soluble fiber can help manufacturers answer the demand for fortification and improve the nutritional profile. Made using exclusively licensed micro-reactor technology developed in partnership with Germany's Karlsruhe Institute for Technology, this results in soluble fibers with low color and low off-taste. They are available in both liquid and powder forms, based on wheat or corn.



Sweeteners

Cargill offers one of the broadest sweetness portfolios, ranging from full- to no-calorie options, and high intensity sweeteners.

Our extensive range of full-calorie sweeteners is based on a unique blending concept. Our flexible processes enable us to produce tailor-made syrups, with functional and sweetness properties customized to suit individual customer needs, such as shelf-life extension, browning, texture and sweetness.

In addition, Cargill also provides a range of low- and no-calorie options and high intensity sweeteners.



Product	Features & Benefits
Full calorie sweeteners	
Glucose syrups C☆Sweet®	<ul style="list-style-type: none">· Low to moderate relative sweetness· Medium to high viscosity, body, and mouthfeel· Can be tailored in sweetness profile and functionality
Glucose-fructose syrups C☆TruSweet®	<ul style="list-style-type: none">· Moderate to high relative sweetness· Cost-effective sugar replacement· Can be tailored in sweetness profile and functionality
Dextrose Starterzucker® C☆Dex® 02003, 02005, 02007	<ul style="list-style-type: none">· Moderate to high relative sweetness· Cost-effective sugar replacement· Can be tailored in sweetness profile and functionality
Low- / no- calorie sweeteners	
Polyols	<ul style="list-style-type: none">· Wide variety of polyols available that can support bulking, calorie reduction and functionality needs· Sugar-lik properties, but reduced or zero calories
High intensity sweeteners	
Stevia	<ul style="list-style-type: none">· Nature-derived high intensity sweeteners· Heat-stable· Zero calories

Postbiotics & Pet Premixes

Over half of global pet food new product development from 2021-2023 included a proactive health claim, with the proactive health product positioning category growing 72% (Innova, NPD 2024). Our market-leading postbiotic ingredients help modern pet food innovators deliver multiple on-trend health claims, backed by multiple dog and cat studies.

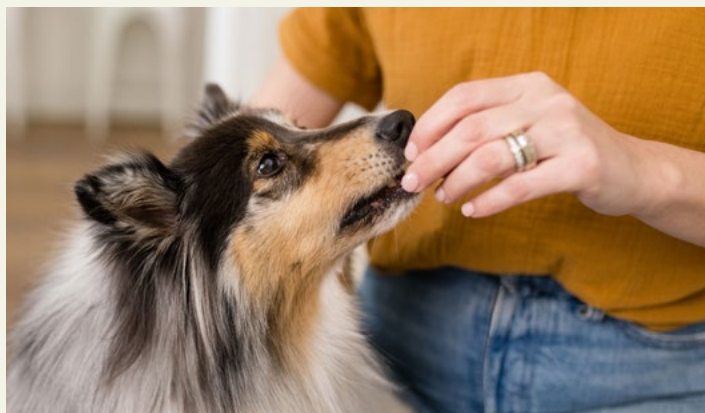


TruPet™

TruPet™ is a natural* complete postbiotic ingredient. It's a single low-inclusion ingredient that supports multiple trending health benefits and retains stability through modern pet food processing conditions, including retort, extrusion, and high-pressure processing.

Pet-proven health benefits:

Digestive health, balanced gut microbiome, immune health, vitality



EpiCor® Pets

EpiCor® Pets is a human-grade natural* complete postbiotic ingredient. It's trusted by people in their own diets and is proven effective in pets, too. EpiCor Pets is a highly concentrated super ingredient that can be added to any pet nutrition formula while retaining efficacy.

Pet-proven health benefits:

Digestive health, balanced gut microbiome, immune health. Everyday stress management, breath freshness



Pet premix

As a global pet nutrition solutions partner, we offer specialized pet vitamin & mineral premixes and ingredient blends leveraging decades of expertise. Each raw material used in our premix production facilities is tested to meet the unique specifications for pet food manufacturers.

*Natural as defined by AAFCO & FEDIAF



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