

PETFOOD FORUM

Where the GLOBAL PET FOOD
INDUSTRY does business

Harnessing Blood-Derived Proteins from the Meat Industry for Sustainable Pet Nutrition



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#petfoodforum

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Overview

- Establishing Industry Sustainability Measurements
- Contributing to Sustainable Food Systems
- Transformation to High Value Nutritional Resources:
How Blood-Derived Proteins are Used in Pet Foods

Establishing Industry Sustainability Measurements



Pet Food Professionals & Industry Ingredient Suppliers Care About Sustainability

Pet Food Professionals Surveyed

- 86% work for companies with goals related to sustainability

When ranking challenges:

- 40% ranked ingredient data first
- 29% calculation of data
- 14% formula data

Blood Derived Ingredient Suppliers

- Establishing carbon footprint data with reputable organizations

For animal byproducts:

- European Animal Protein Association
- North American Renderers Association

Understanding the Customer Perspective

- As a company, APC realized carbon footprint values assigned to us by customers seemed incorrect (at least from our perspective!)
- There are many data sources – some good and some with dubious information
- We learned there was not a category for the type of products manufactured by APC and other companies focused on value added blood products

Sustainable from the Start

Simply knowing your entire business is built on upcycling is not enough.



Engaging Sustainability Experts

- European Animal Protein Association (EAPA) member companies engaged a consulting group to review existing carbon footprint values and understand the disconnect
- EAPA and our consultants engaged with the Global Feed LCA Institute (GFLI)
- GFLI is an independent animal nutrition and food industry institute with the purpose of developing a globally accessible animal nutrition Life Cycle Analysis (LCA) database

EAPA Member Companies

APC Europe

Spain

<http://www.APCproteins.com>

Sonac blood products

Netherlands

<http://www.sonac.biz>

Veos

Belgium

<http://www.veos.be>

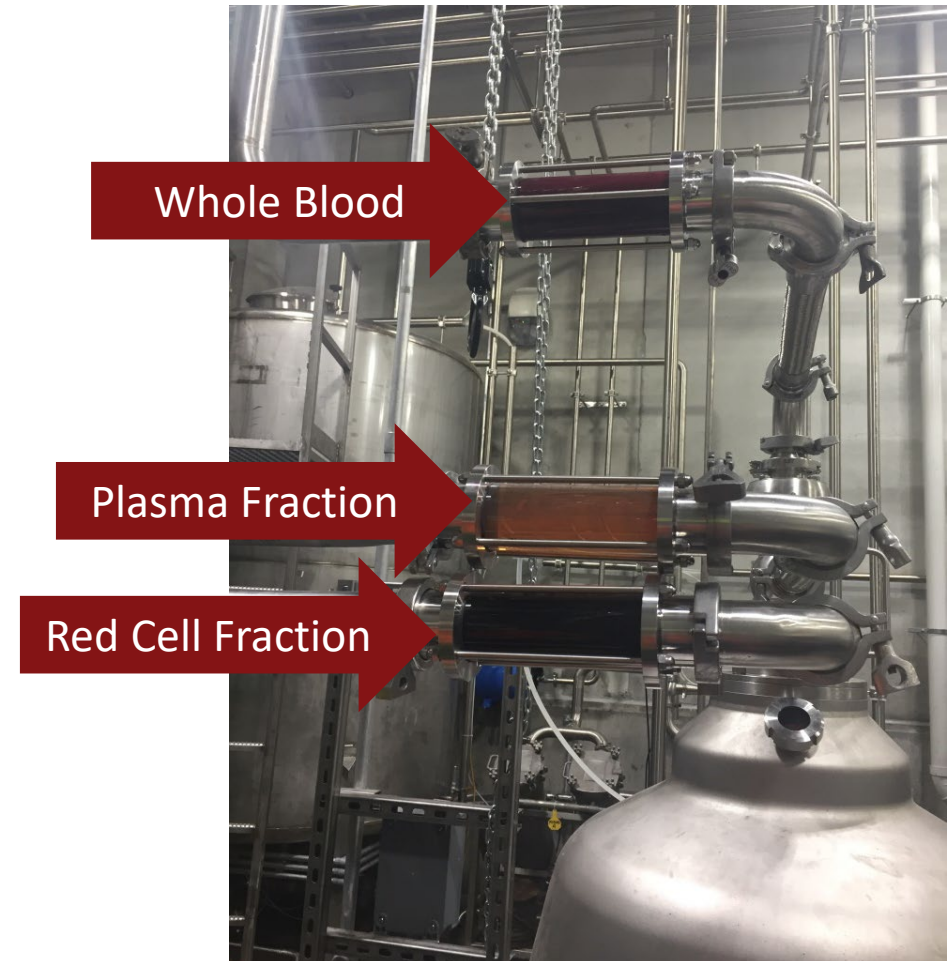
Serafrance

France

<http://www.serafrance.com>

Establishing New Carbon Footprint Categories

- GFLI had no category for blood products beyond bloodmeal
- EAPA members, including APC, engaged GFLI to share how our ingredients are sourced and manufactured
- GFLI established new categories and values for spray dried plasma and red cells



Why Plasma & Red Cells are Different

- Whole blood was typically considered a low value waste product and potentially, an environmental hazard
- Rendering based companies focus on upcycling – hygienic collection and further processing to transform waste into value added ingredients
- Spray dried plasma and red cell fraction products now have established CO2 values in GFLI

Contributing to Sustainable Food Systems

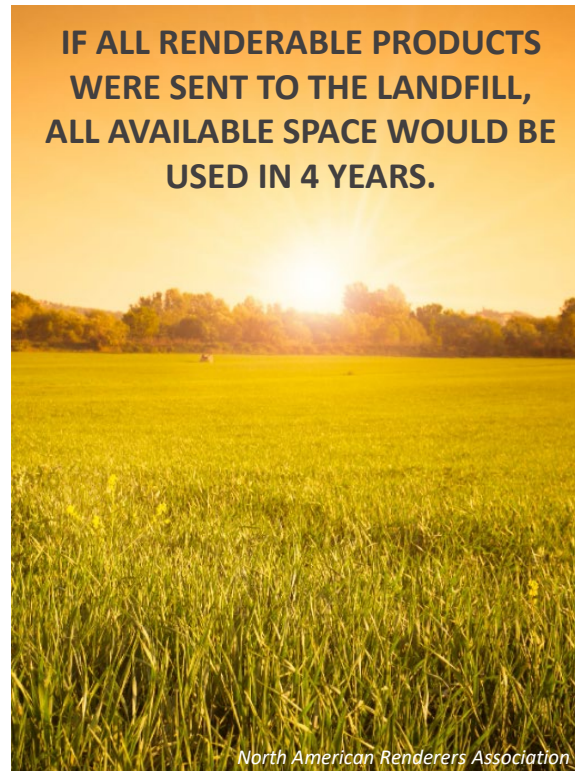


Blood Derived Proteins Reduce Food Waste

- Roughly 50% of an animal is considered inedible by Americans
- Rendering-focused companies reclaim meat co-products (like blood) and transform it into valuable ingredients
- Reducing food waste is environmentally responsible, supports sustainability initiatives and is cost effective

99%
of unwanted
meat-derived
raw material is
transformed

Minimizing the Impact of Animal Agriculture



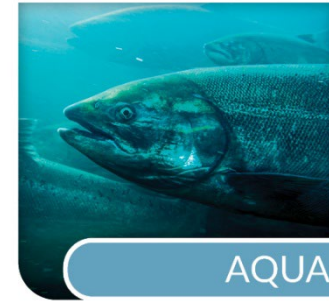
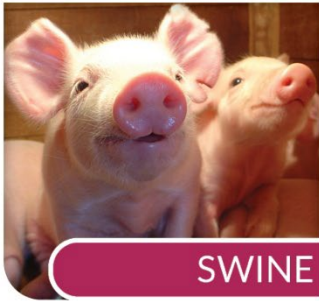
Maximizing the Value of Resources

- Using highly regulated processes, whole blood is collected and turned into spray dried plasma and red cells
- Red cells become high quality protein in a variety of animal diets
- Plasma also retains biologically active functional proteins including growth factors, immunoglobulins and more
- Functional proteins support the immune system, reduce inflammation and improve overall health



Improving Animal Health with Blood Derived Proteins

By using every part of the animal,
we reduce waste and help other animals thrive



WATCH THEM *thrive*

Transformation to High Value Nutritional Resources



Consumers Have High Expectations for Ingredients & Sustainability as a Whole

- Survey reveals pet parents consider natural aspects in pet food in purchasing decisions
 - 80%+ view pet food with fewer or no additives as healthier
 - 79% check labels for disliked ingredients
 - Natural ingredient claims significantly influencing purchase decisions
- 58% of pet owners indicated they are trying to have a positive impact on the environment
 - 32% of U.S. gen Z consumers take the environment into consideration in the purchase decisions all or most of the time



Plasma Offers Nutrition, Palatability & Functionality: Natural and Sustainable

- High in protein, amino acids and biologically active components
- Provides both nutritional and health benefits when orally consumed by animals
- Composition provides physical functionality in animal food processing



Plasma Nutrition

- High levels of protein – 78% minimum
- Low in ash – 10% maximum
- Rich in Amino Acids
- Allows formulators to increase overall protein with an ingredient that doesn't impact yield

| TYPICAL AMINO ACID ANALYSIS (AS FED) | | | |
|--------------------------------------|-------|---------------|------|
| Alanine | 4.2% | Lysine | 6.8% |
| Arginine | 4.7% | Methionine | 0.6% |
| Aspartic Acid | 7.9% | Phenylalanine | 4.6% |
| Cysteine | 2.5% | Proline | 4.5% |
| Glutamine Acid | 11.7% | Serine | 4.7% |
| Glycine | 3.0% | Threonine | 4.3% |
| Histidine | 2.8% | Tryptophan | 1.4% |
| Isoleucine | 2.9% | Tyrosine | 3.6% |
| Leucine | 7.8% | Valine | 5.3% |

Plasma Palatability

- High protein from animal source
- Provides meaty flavor desired by dogs and cats
- Promotes wild, natural nutrition while reducing food waste



Plasma: Functionality

- Pet Health Benefits

- Immune Support
- Digestive Health
- Muscle & Joint
- Skin & Coat

- Formulation Benefits

- Extend or replace other proteins
- Improve functionality of formulas
- Enhance labeling & health claims
- Reduce less desirable ingredients



Plasma Works Across All Formats

Wet, Dry, Treats & Supplements



Blood Derived Proteins Support the Circular Economy

- Upcycled raw materials for zero waste
- Help animals thrive through better nutrition
- Favorable carbon footprint as compared to many other pet food ingredients
- Industry commitment to sustainable sourcing and manufacturing



Blood derived proteins make the entire food chain more efficient and provide benefits for our pets and industry.



Thank you!

About
APC



About
EAPA



About
NARA



About
GFLI



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