



Vegotein[™] CLEAR PEA Protein

Clean Label Conference, May 23-24, 2023

CLEAR Pea Protein[®]

Next Generation Functionality

VEG-TEIN[™]
Pea Protein
CLEAR

- New technology maximizing suspension & neutral organoleptics
- 3 Patents Filed
- New applications possible

Pronunciation:

“vej-OH-teen”

Ingredient Label:

(Organic) Pea Protein
Hydrolysate



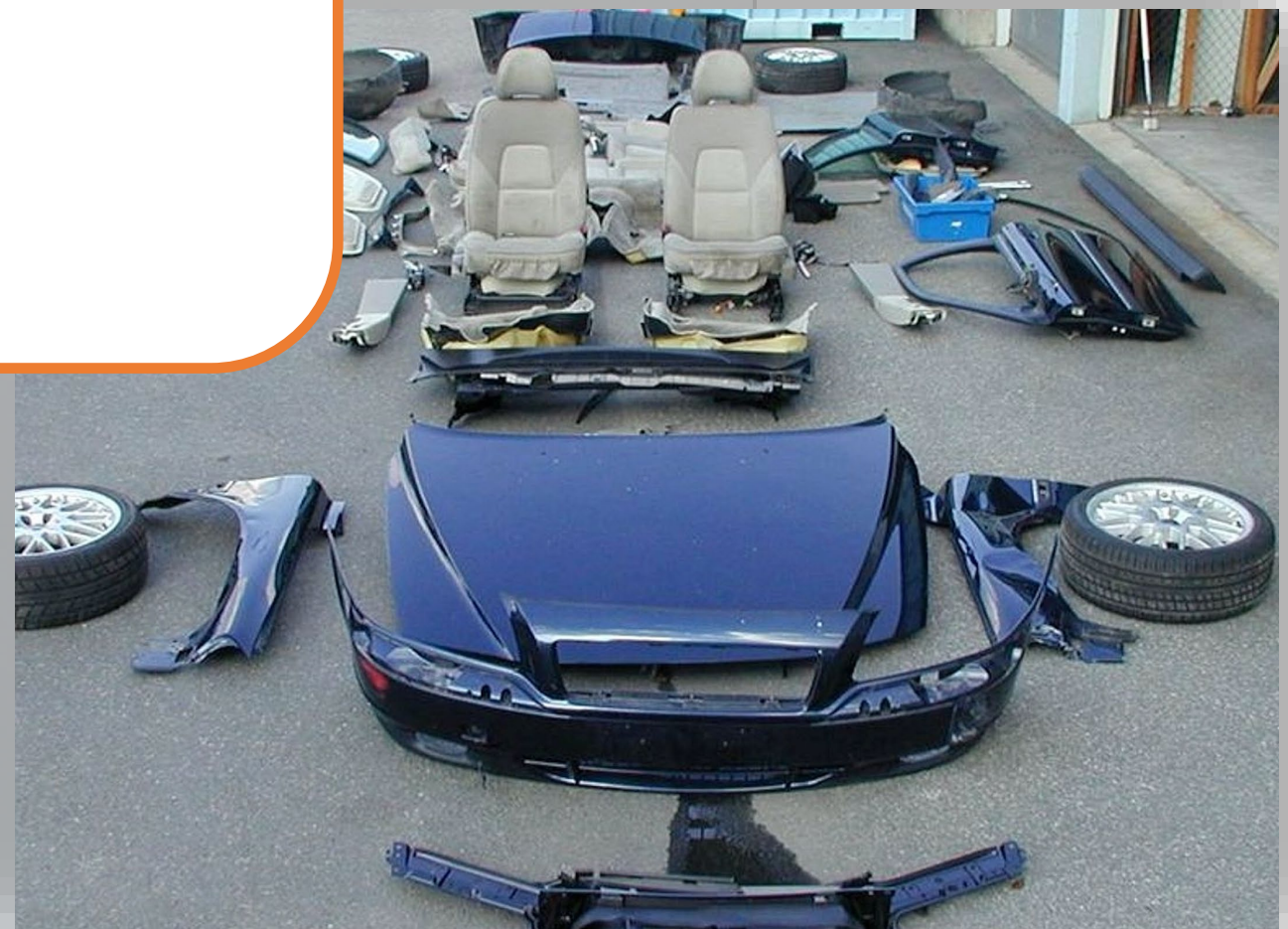


Plant Protein Fractioning Processes

Variations for Added-Value Functionality

Why CLEAR Now?

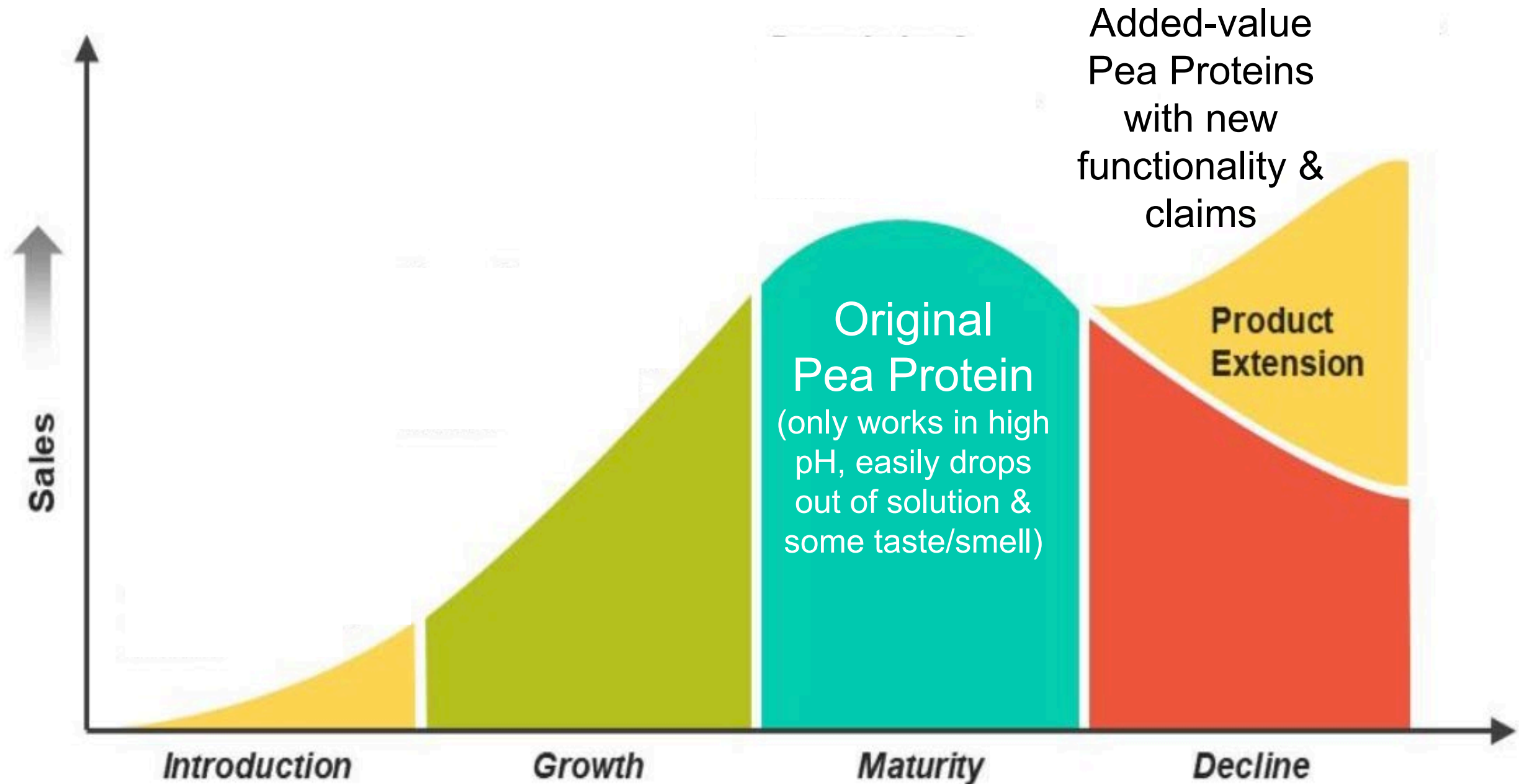
- Machinery/technology has been developed
- Enzymes have been developed
- Market is ready/requesting
 - Hydration drinks trending
 - Consumers willing to pay more
- Refined better tasting process





Next Generation Possibilities

Matches Evolution of Finished Products





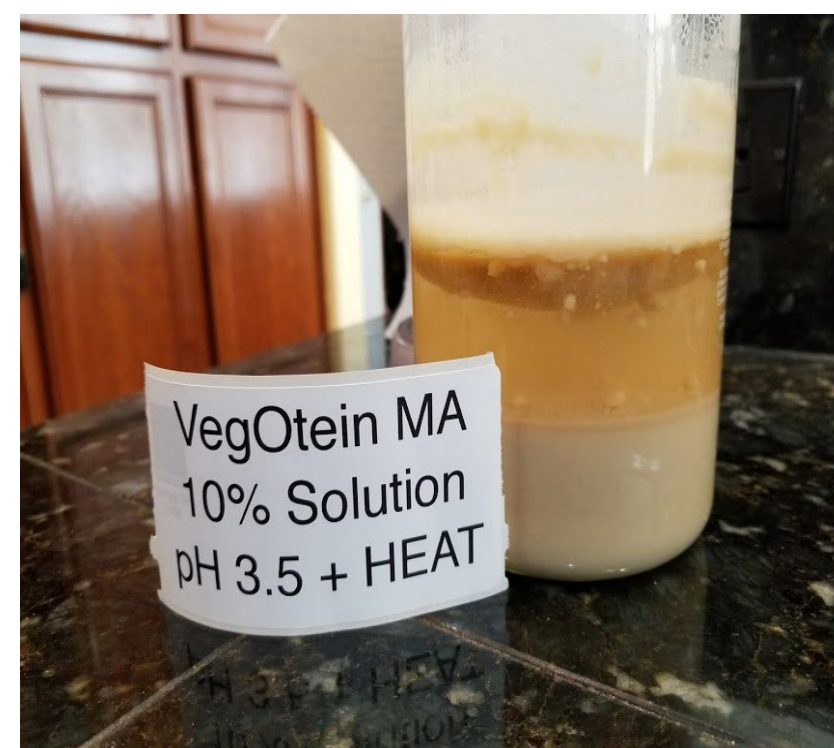
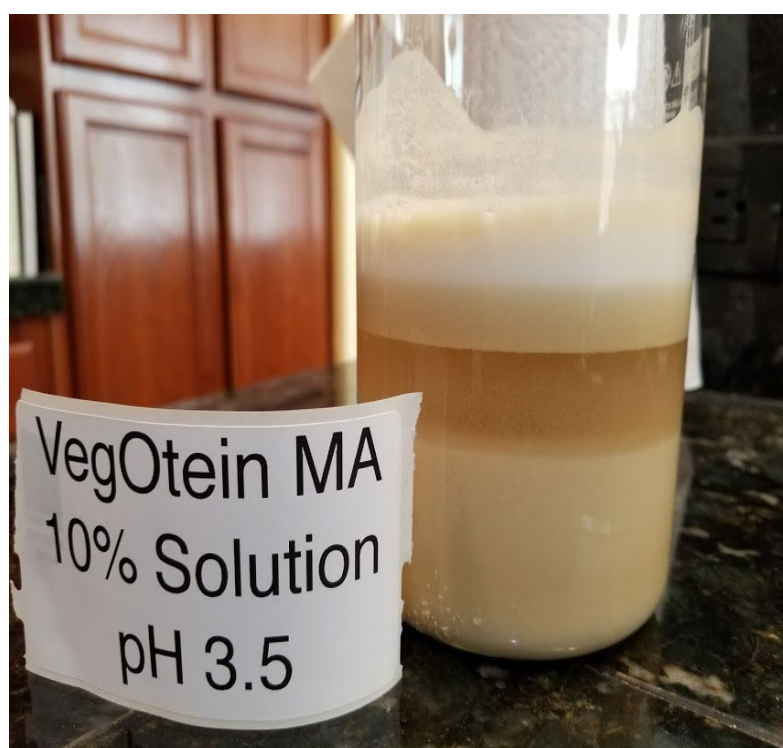
Challenges That CLEAR Overcomes

Isoelectric Point – Settling Demonstrations

Original Pea Protein

- Falls out of solution more with low pH, high acid fruit-based formulations (needs pectin to buffer)
- Slight smell and taste

Isoelectric Point – Settling Demonstrations





Next Generation Plant Proteins

Improved Bioavailability

Better & Quicker

- Both Rice & Pea CLEAR® Proteins 100% hydrolyzed, 90% peptides, tested molecular weight
- Typical/original plant proteins
 - 100% digestible but not 100% absorbable
 - plant protein polymer is “folded”
 - stomach acids don’t fully absorb
 - some passes thru digestive system without absorption
- Hydrolyzation breaks protein chain up into smaller segments
 - Original Rice protein is already quickly absorbed (33% faster than whey)
 - Now absorbed even faster for quicker benefits
- Ideal for Sports Nutrition & Hydration Beverages





CLEAR Plant Proteins

Sustainability & Inclusivity Claims



Ideal Alternative to Whey & Soy

- Plant-based
- Vegan
- Free From Allergens – Axiom is most consistent & guaranteed source testing clean
 - Most Pea Protein has gluten cross-contamination -- but NOT Axiom's
 - Legume that's not top allergen like soy
- No waste stream from raw material to finished product
- Water recycled



**FREE FROM
GLUTEN,
DAIRY, SOY
& MORE**

Sports Nutrition

- Easier & faster absorption for immediate benefits before, during & after physical activity
- Most neutral organoleptics
- High protein concentration over 90% so small serving size approx.
1 g powder to 1 g protein

Learning from
Formulators Testing

Typical of
New Ingredient
Launches

Powders & Bars

- Using because:
 - smooth, not gritty
 - quicker absorption for benefits
- Improving Texture & Price:
 - Can blend with other proteins to reduce cost of CLEAR
 - but improve texture of other proteins



Application Opportunities for CLEAR Pea

Sports Nutrition & Juices

RTDs

- Ideal for high acid, low pH formulation with electrolytes or fruit
- 100% smooth
- Not too thickening (pea traditionally higher viscosity than rice)
- Clear!
 - Pea more consistently clear than Rice
- Can help aid absorption of other nutrients
- Recommended 8-10g protein per serving before bitter taste needs to be masked
 - Pea reaches higher concentrations before change in taste



Soups & Dressings

- Semi-clear broths and oil-based dressings
- Benefiting from protein claim

Fruit-Based Pouches

- Family snacks, etc.
- Solution for vegan formulations that previously have added plant proteins that fall out of solution a pH below 4

Hospital Nutrition

- Quick dense nutrition absorption





Bench Batches to Commercial Production

Certifications & Capacity

Commercial Viability

Extensive Testing/Certification:

- Applying for GRAS in US (self-affirmed by end of 2023)
- Halal, Kosher
- NOP & European Organic
- Non-GMO
- FFSC

Capacity:

- Made in China to start
- 100-200 metric tons/month within 1-2 months of orders placed
- 10,000 to 12,000 metric tons/year (1,000 metric tons/month) by end of 2023 based on forecast



Blending for 1 PDCAAS

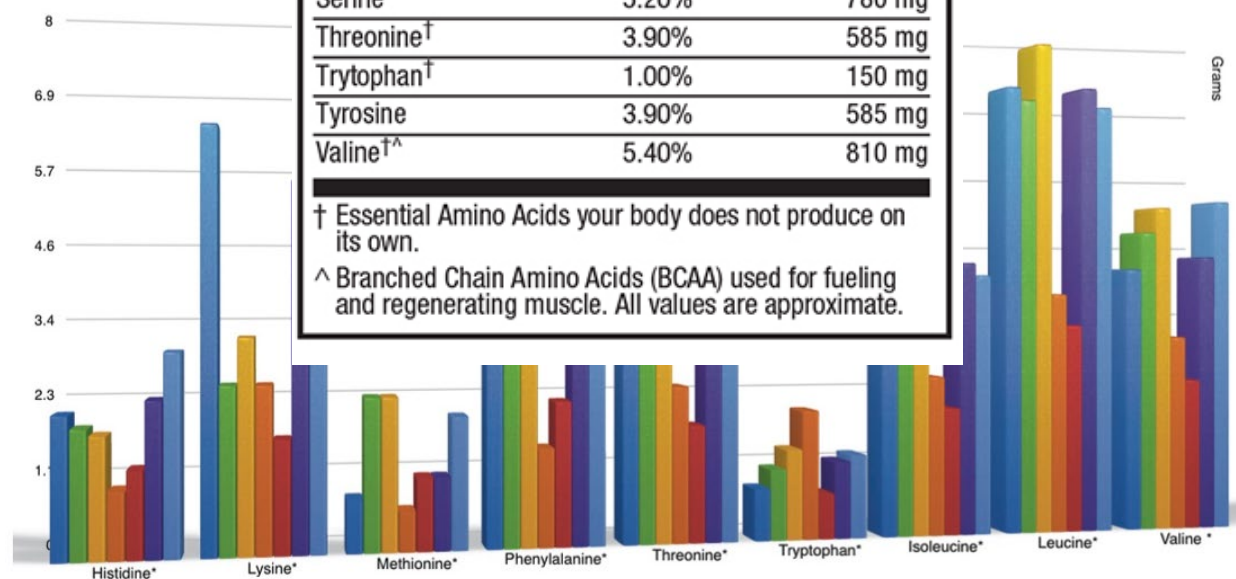
Grain + Legume = Complete Protein

TYPICAL AMINO ACID PROFILE OF PEA PROTEIN

Amino Acid	% Total AA	Per Serving
Alanine	4.40%	660 mg
Arginine	8.20%	1230 mg
Aspartic Acid	11.90%	1785 mg
Cystine	1.00%	150 mg
Glutamic Acid	16.20%	2430 mg
Glycine	4.10%	615 mg
Histidine [†]	2.40%	360 mg
Isoleucine ^{†^}	5.00%	750 mg
Leucine ^{†^}	8.40%	1260 mg
Lysine	7.60%	1140 mg
Methionine [†]	1.20%	180 mg
Phenylalanine [†]	5.70%	855 mg
Proline	4.50%	675 mg
Serine	5.20%	780 mg
Threonine [†]	3.90%	585 mg
Tryptophan [†]	1.00%	150 mg
Tyrosine	3.90%	585 mg
Valine ^{†^}	5.40%	810 mg

[†] Essential Amino Acids your body does not produce on its own.

[^] Branched Chain Amino Acids (BCAA) used for fueling and regenerating muscle. All values are approximate.



■ Pea Protein Concentrate (VegOtein)
 ■ Rice Protein Concentrate (Oryzatein 80)
 ■ Rice Protein Isolate (Oryzatein 90)
 ■ Sacha Inchi Protein Concentrate (Incatein)
 ■ Hemp Protein Concentrate (Cannatein)
 ■ Soy Protein Isolate (Solae)
 ■ Canola Protein Isolate

While Oryzatein CLEAR Protein comes with protein claims, sometimes PDCAAS is a driving formulation factor.

Rice Protein is naturally higher in 2 amino acids that Pea Protein is lower in. And vice versa. The blending of CLEAR Rice & Pea Proteins can help achieve the desired outcome.

COMPLETE PROTEIN POWER COUPLES

Consume one from each group for balanced amino acids.

They don't have to be eaten together. Just within 24 hours of each other.



PICK ONE OF EACH

Questions?



Rick Ray

Director of Food Technology

Rick@axiomfoods.com

916-813-1878

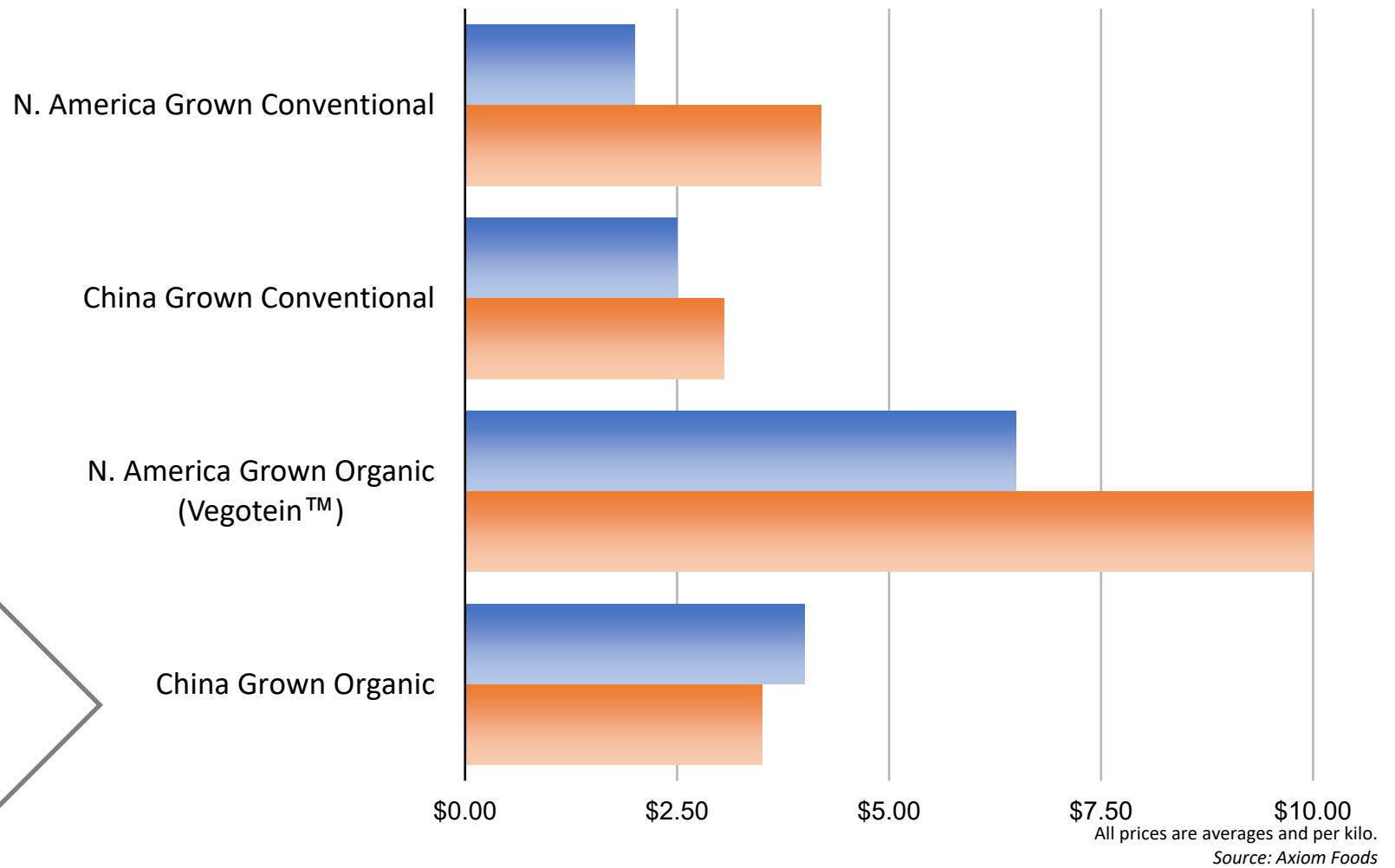
HQ: Los Angeles, CA



- APPENDIX FOR REFERENCE IF WILL HELP WITH QUESTIONS

Low-Cost “Organic” Too Good to be True

Cost of Raw Material (alone)



Crop Cost
alone is more than
Price Sold For











■ Cost of Pea Crop Material*

■ Price Selling For**

Vegotein™ Pea Protein by Application

Quick Look Across Functional Line

NEWS:
Vegotein™ CLEAR is
ideal for beverages

VEGOTEIN™ Pea Protein Functional SKU by Application		CLEAR	Texturized	Neutral	Original P&Z
Infant & Toddler Nutrition		Great	N/A	N/A	N/A
Beverages/Pouches (High Acid)		Great	N/A	N/A	N/A
Beverages (Low Acid)		Great	N/A	Good	Great
Protein Powder/ Sports Nutrition		Great	N/A	Great	Great
Dairy Alts		N/A	N/A	Great	Great
Baked Goods/ Egg Replacer		N/A	N/A	Great	Great
Encapsulation		N/A	N/A	Great	Great
Bars & Snacks		N/A	Good	Great	Great
Breakfast Foods & Cereals		N/A	Good	Great	Great
Vegan Meat/ Meat Extenders		N/A	Great	N/A	Great

Great
Good
N/A

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