

Innovative Plant-Based Ingredients & Market Overview



The Axiom Foods' Ingredient Difference

Setting the Bar Once Again





Market Specialist

We currently work with

Brown Rice Yellow Peas Sacha Inchi Seeds Hemp Seeds Oats

In the Pipeline

Rice Bran Coconut Flax Pumpkin Sweet Lupine Almond Grain / Barley And More

New Functional Testing

More Neutral Versions

More Suspendable and Soluble Versions

More Claims-based Versions

All we do is **innovate** and **fraction plantbased nutritional ingredients**, in large **commercial quantities**, which are in **increasing demand**, and **distribute** them.

Our core specialities have been plant proteins and dairy alternatives.

David Janow's Vision in 2005

Innovate + Manufacture + Distribute Nutrition

Utilize plant-based waste streams to create nutritious ingredients which are high-quality, hexane-free, all-inclusive, allergen-friends, sustainable, gluten-free, clean label sources.

The answer to pending protein shortages, unsustainable animal protein, and fluctuating animal-based ingredient costs.

AMONT Axiom's Worldwide Reach



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The Only Truly Organic Rice & Pea Proteins

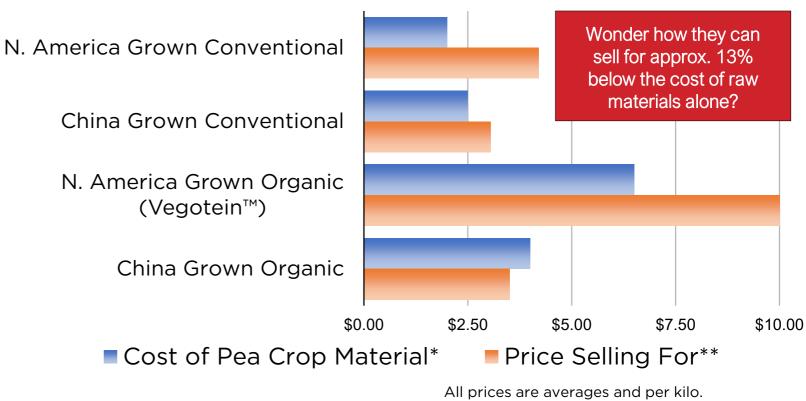
Truly Organic & Pesticide-Free Certification starts at the field & without the proper documentation at every step it's not "organic". Is it worth the risk?

Guaranteed Soy & Gluten-Free The only pea protein making this guarantee while others experience regular cross-contamination.

Axiom Foods helped create the Organic Rice Protein market in 2010, and Organic Pea Protein market in 2015, securing one of the 1st agricultural sources and setting a standard.

More information available upon request.

USDA Cracking Down on False Organic Plant Protein Certification Claims



Source: Axiom Foods

Axiom Ingredients

Products, Labels, and Claims



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Oryzatein[®] Rice Proteins

Benefits & Points of Differentiation

Our Oryzatein[®] vs Other Types of Protein

- \checkmark All-inclusive allergen-friendly nutrition. Free of dairy, soy, and gluten (<20ppm).
- ✓ Neutral color and taste.
- ✓ High-quality plant-based protein source with all the Essential and Non-Essential Amino Acids which are clinically shown to act like a complete protein & easily meets PDCAAS 1 when blended with pea protein
- $\checkmark\,$ 100% natural, vegan, and free of GMOs, cholesterol and sodium
- $\checkmark\,$ World's 2nd largest crop & solution for pending world shortage of protein
- ✓ FDA GRAS food can have a Nutrition Label
- \checkmark Low FODMAP for diet (at all serving sizes)
- \checkmark High in cysteine & methionine
- $\checkmark\,$ Approx. 38% EAAS & 18% BCAAs

Our Oryzatein[®]... vs Other Rice Proteins

- $\checkmark\,$ First, largest and most consistent source of organic rice proteins
- $\checkmark\,$ Non-GMO Project Verified
- ✓ Only Patented for use as a sports nutrition dietary source
- ✓ Clinically tested to be as good as whey at building muscles and strength, plus aiding muscle recovery
- ✓ Will be USP Monographed standard by which all rice proteins are measured



Pronunciation "oh-RAHYZ-uh-teen"

Ingredient Label: Organic Brown Rice Protein

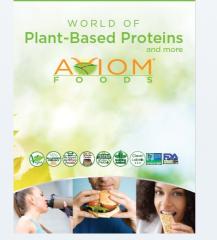


Oryzatein[®] Rice Protein Applications

There are multiple functional versions of our rice and pea proteins.



These are examples of four of our rice proteins and the differences between which applications they are ideally suited for.



Visual and more available in World Brochure

Oryzatein[®] Rice Protein Functional SKU by Application Original Silk Ultra SGBN Pouches Dairy Alts Beverages Cosmetics Protein Powder Breakfast Foods Bars & Snacks Baked Goods Pet Nutrition Good Great Fair

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Vegotein[™] Pea Proteins

Benefits & Points of Differentiation

	Certifications	Characteristics	Process
All Vegotein	FDA GRAS North America Non- GMO Certified Peas GFSI-Certified under BRC Organic Kosher GMI Audit	Guaranteed soy & gluten-free High in lysine and arginine Natural source of both protein and iron Low FODMAP with diet (at 30g product max) Great dispersibility, stability, and dissolving Suspendable Falls out of solution slowly Isoelectric point - 4.2 pH Emulsification Should have some binding capabilities Tan, smooth, and thick	<text><text><text><text><text></text></text></text></text></text>

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Vegotein[™] Pea Proteins

Line Differences

	Product	Flavor	Other defining characteristics
	Vegotein P (Original)	Slight pea flavor	
		Neutral flavor	Made in the USA
	Vegotein N (Neutral)		1.0 PDCAAS
NEW!			Highly functional
			Patent Pending
	Vegotein MA (Meat Analogue)	Slightly salty umami flavor	Homogenized
			Highly functional
	Vegotein HP	Slight pea flavor	Hydrolysis degree 10 - 20%
NEW!	(Hydrolyzed Pea)		Highly functional
NEW!	Vegotein TX (Texturized Pea)	Slight pea flavor	1.0 PDCAAS
			Highly functional
			4 versions



Cannatein[™] Hemp Protein Benefits & Points of Differentiation

CANNATEIN® HEMP HEART PROTEIN



NEW! THE MOST NEUTRAL COLOR & FLAVOR AVAILABLE ON THE MARKET

- ✓ Allergen-friendly, THC-free seed (< 20ppm)
- \checkmark Free of dairy, soy, and gluten (<20ppm).
- ✓ Hemp Hearts Protein is also a good natural source of Omegas 3 & 6 (key fatty acids), Manganese, Magnesium, Iron, Phosphorus, Zinc, Copper, Folate, Thiamin, Niacin & Vitamin B6
- ✓ Ideal for aiding satiety in weight loss products due to combination of protein + fiber
- $\checkmark\,$ Good water binding for meat analogues
- Protein especially high in cystine and methionine which serve as antioxidants and high in arginine for sports nutrition
- ✓ Offered in ≥ 58% protein concentration. Approximately half protein and other half carbs, healthy GLA fats & other nutrients.

Pronunciation "CAN-uh-teen"

Ingredient Label: Organic Hemp Protein or Organic Hemp Hearts Protein

PM Incatein[™] Sacha Inchi Protein



SACHA INCHI PROTEIN



√ Made in Peru

- \checkmark Natural source of Omegas. The only protein containing the exact proportion of omegas 3, 6 & 9 that our bodies need
- ✓ Allergen-friendly, Peruvian seed
- \checkmark Excellent composition of amino acids and soft, nutty flavor
- ✓ Easily digestible
- \checkmark High in tryptophan essential Amino Acid (AA)
- ✓ Tan color and nutty flavor
- √ 100% natural and vegan

Pronunciation "ING-kuh-teen"

Ingredient Label: Sacha Inchi Protein



Cucurbotein™ Pumpkin Seed Protein

CŪCURBÓTEIN™



Pronounciation "kyoo-CURB-oh-teen"

> Ingredient Label: Pumpkin Protein

- ✓ Three organic versions
 - Raw 65% (one of the highest concentrations available)
 - Toasted 59%
 - Raw 55%
- ✓ Rich in arginine essential amino acid maintains acid/base balance, helps nitrogenous waste excretion, making NO (nitric oxide) to support healthy heart and vascular function
- ✓ Can be a good source of iron, zinc, copper, manganese, magnesium and potassium
- ✓ Allergen-friendly seed
- ✓ Colors ranging from light green raw to light brown toasted
- ✓ Lighter pumpkin seed flavor than typically found in the market
- $\checkmark~$ 100% natural and vegan
- $\checkmark\,$ Blends with pea protein to make a "complete protein"



Plant Proteins - All

General Marketing Claims - - Many Are Unique to Axiom Foods

Protein Structure/Function & Certification Claims:

Helps support muscle maintenance, immune system, hormones, and feeling fuller Allergen-Friendly Free of Top 8 Allergens Gluten-Free Dairy-Free Soy-Free Non-GMO Project Verified Vegan Kosher Naturally Free of Cholesterol (vs whey) Organic

> Claims are suggested and need to be verified by manufacturer based upon finished product.

Ask to See Complete Claims Guidance

AMIK Substitutes

- Exceptionally dispersible
- Nutrient-dense
- Certified 100% Whole Grain
- Sourced and made in the U.S.A.
- Neutral taste perfect for mixing
- Excellent for beverages, frozen treats, bakes goods and more
- Oat dairy alternative has same claims as whole oats and thus is also believed to help lower LDL cholesterol and reduce the risk of heart disease





Oryzolait™ & Avenolait™ Dairy Alternatives

General Marketing Claims – Many Are Unique to Axiom Foods

Dairy Alt Structure/Function & Certification Claims:

<u>Both:</u> Allergen-Friendly Dairy Free Soy Free Non-GMO Vegan Kosher Naturally Free of Cholesterol (vs milk) Free of Top 8 Allergens Gluten-Free (Oat upon request) Organic Made in the U.S.A.

<u> Oat:</u>

Contains many of the same essential vitamins, minerals and nutrients found in whole grain oats, which are known to help lower LDL cholesterol and also reduce the risk of heart disease.

Ask to See Complete Claims Guidance

Claims are suggested and need to be verified by manufacturer based upon finished product.

Brown Rice Syrup Solids



Allergen-friendly





- High perceived sweetness level of 120 with 90-93 DE (primarily glucose)
- Greater carrier for other ingredients and aids absorption
- Electrolytes in oral rehydration products Sport nutrition products Cooling effect like xylitol **Pronunciation:** Economically efficient "oh-RAHYZ-uh" Ease of plating flavors **Ingredient Label: Rice Syrup Solid** 90-100 on glycemic index ullet17

Benefits & Trends of Plant Proteins

- Protein Trends and Audiences
- Consumer Motivations and Consumption
- Addressing Health Needs: Allergens and Aging

Additional information available upon request





Protein Trends Summary Key Consumer Trends Shaping Market

PROTEIN'S BROAD CONSUMER APPEAL

 Protein seekers are not just weight managers & bodybuilders – they include children, seniors, health & wellness motivated & more

THE RISE OF THE "ACTIVE LIFESTYLE" CONSUMER

Pursue fitness as part of an overall healthy lifestyle; protein viewed as important in achieving
overall health and wellness goals

DEMAND FOR CONVENIENT, PORTABLE NUTRITION

• Increased snacking behavior; use of snacks as drive demand for nutritionally enhanced option

PLANT-BASED NUTRITION

 An international shift in consumer intent 8 desire to consume more plant foods and reduce animal consumption

CONSUMER'S CHANGING EATING STYLES

• The rise of "flexitarianism;" personalized nutrition opportunities

38% of US consumers believe it is extremely / very important their food includes plant-based ingredients



Plant Protein Trends In the News

Scientists, Investors, Silicone Valley & Industry Leaders Predicting Plant Protein Trends



Investors worth 1.25 trillion urge industry to switch to sustainable plant proteins

"...targeted 16 food companies including Kraft Heinz, Nestle, Unilever, Tesco, Walmart & General Mills."

FORTUNE

6 most important tech trends according to Eric Schmidt

(CEO of Alphabet, Google's parent company) "#1 Plant protein... Replacing livestock with growing and harvesting plants could reduce greenhouse gas emissions and fight climate change"



"Americans are increasingly looking to add more protein to their diets, and rice protein is seen as an attractive alternative. Jane Wells speaks to the CEO of Axiom,"



Major beef supplier Cargill to exit U.S. cattle-feeding business

"Cargill wants to expand its North America-based protein business by exploring plant-based protein, fish and insects,"

The Washington Post

Plant proteins, healthy fats and more 2017 food trends

"Plant-based proteins are sustainable, affordable and nutritious. They're also incredibly versatile, and healthy food companies are taking advantage of that aspect to bring vegetarian proteins to every meal and snack."

theguardian

Food shortages could force world into vegetarianism, warn scientists (Stockholm International Water Institute)

"Adopting a vegetarian diet is one option to increase the water available to grow more food in an increasingly climate-erratic world [with 2bn more people estimated by 2050], the scientists said. Animal protein-rich food consumes 5-10x more water than a vegetarian diet. 1/3 of the world's arable land is used to grow crops to feed animals."

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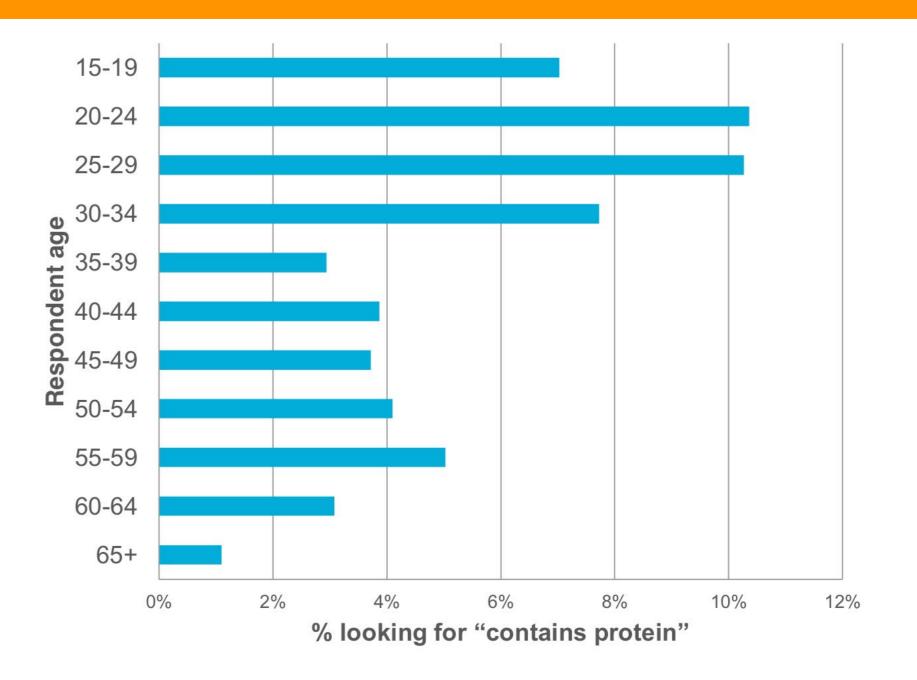


Most Popular Protein Audiences

Millennials, Followed by Baby Boomers

Ebbs and flows throughout their lifetime

Protein aligns with brand-consciousness and fitness trends





Plant-based diet motivators for consumers

Healthier product 60%

Provides more energy 57%

Digestive health 57%

Weight management 56%

Less sugar 55%

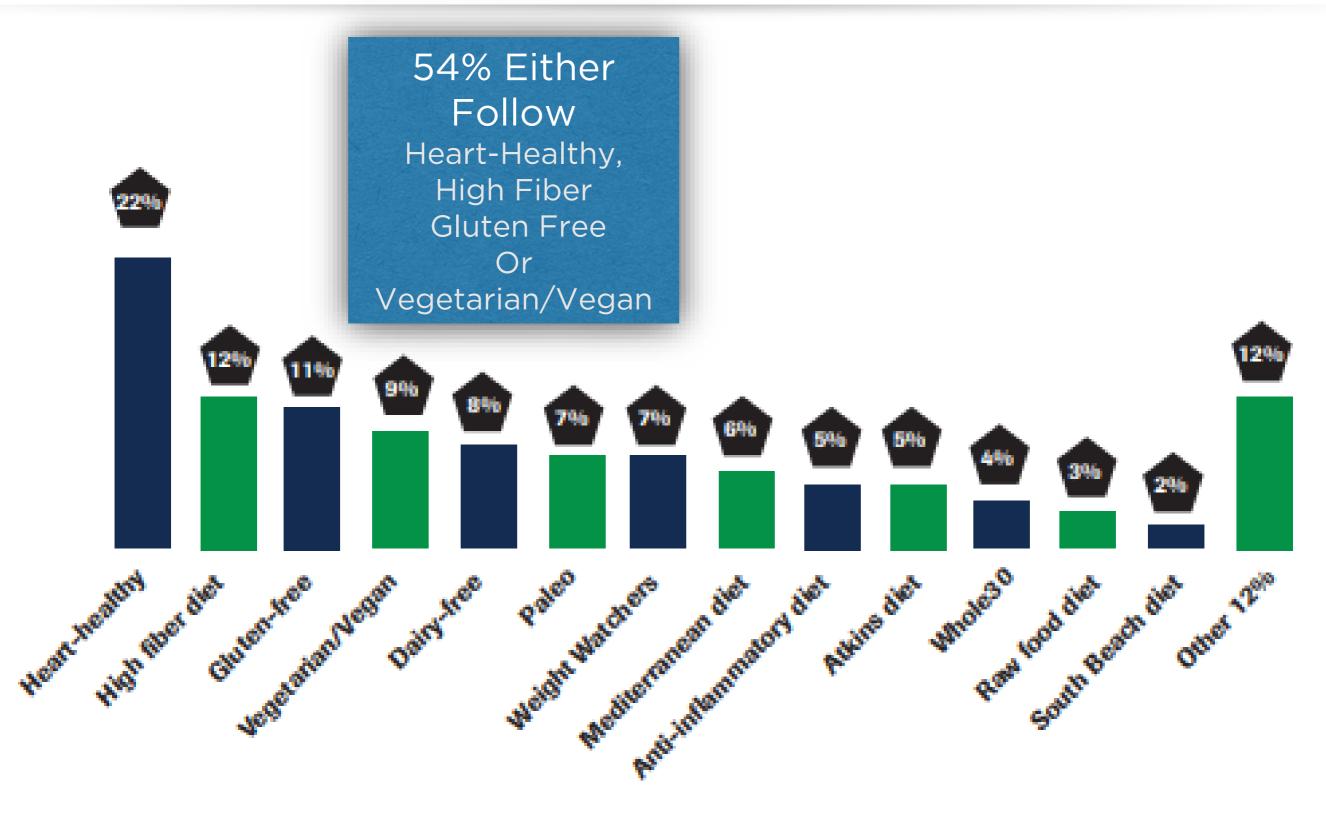
Taste 53%

The number one motivator is general health – people want a "better for them" product



Consumers Motivated by Dietary Programs

Plant Proteins Can Be an Important Part of Most



Source: 2017 Label Insight Shopper Trends Survey/ 2018 CLEAN LABEL CONFERENCE

Consumers Purchasing for Benefit & Quality

Over Form, Brand or Price



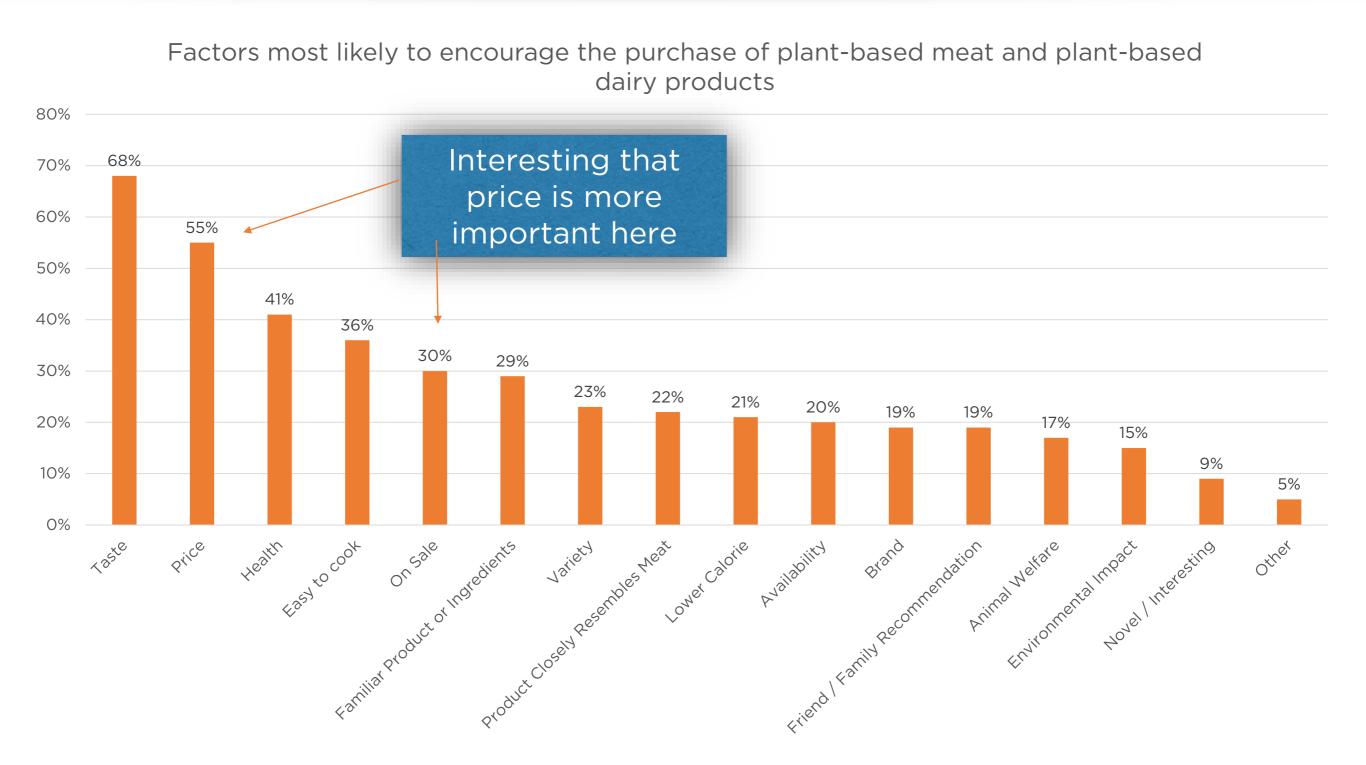
Sources: Packaged Facts, Organic & Clean Label, 2018; IFIC, Food & Health Survey, 2017; FMI, US Grocery Shopper Trends, 2017; Nielsen, Y/E 5/20/17, 2018 CLEAN LABEL CONFERENCE

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Purchasing Factors Plant-Based Alts.

Taste, Price, Health & Convenience Most Important



Category Growth Leader Flexitarians Eat More Plants + Some Animal



39% of US households are trying to increase their plant food consumption 33% Flexitarian

One in three Americans consider themselves "flexitarian," that is eating a diet that is neither wholly animal nor plant-based – but are attempting to eat more plants

flex-i-tar-i-an

|fleks.uh.TAYR.ee.un| n. Someone who actively integrates meatless meals into his or her diet. 58% US adults tried or are interested in eating less meat

58% Eat Less Meat

39% Eat More Plants

79% Millennials & 21% HH Eat Plant-Based "Meat"

21.6% of households (approximately 2 million households) purchase meat alternatives and of those, 27% purchase 5 or more times a year (540,000 households)

Source: Mintel 2018, Protein Trends Conference 2019

79% of Millennials

eat meat

alternatives

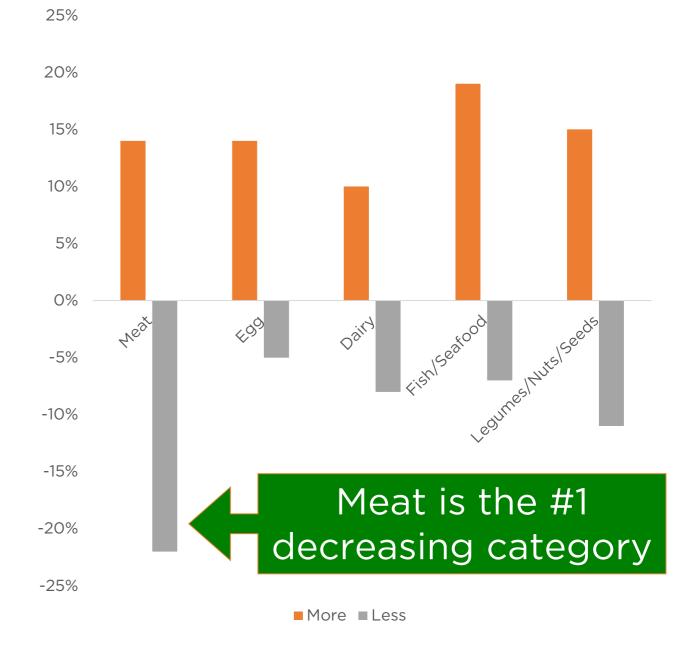


Consumer Protein Consumption

What For & Which Sources

- 51% of consumers say they have protein at every meal
 - #1 to increase/maintain energy
 - #2 to manage weight and maintain muscle
 - #3 for better brain function
- Consumers intend to eat about the same dairy and less meat but eat more protein specifically:
 - Egg
 - Fish
 - Plant-based protein sources

US consumers planning to change protein consumption by source and %





Plant Proteins Fit "Free from" Gluten, Dairy & Soy Trends

Due to an Intolerance, Celiac Allergy, or By Choice

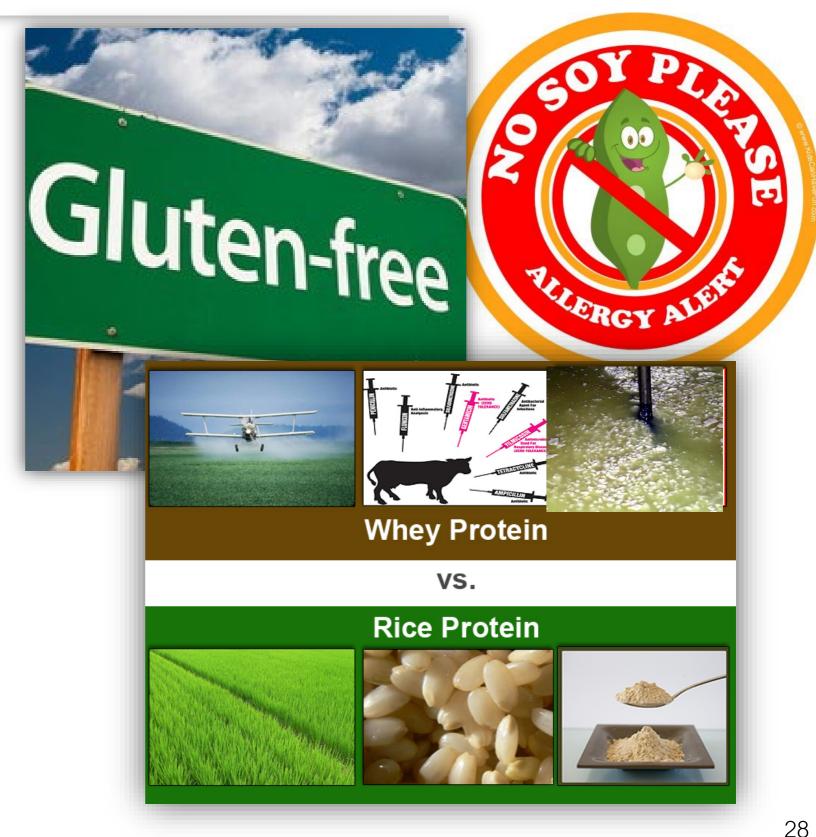
Gluten-free Households 11% HH gluten-free diet

75% by choice (not due to allergy or intolerance)

Source: NPD Group

30 to 50 Million People in the U.S. Have a Dairy Allergy or Intolerance

1 Million People in the U.S. Have a **Soy Allergy**, with millions more being intolerant





Health-Related Perceptions by Age

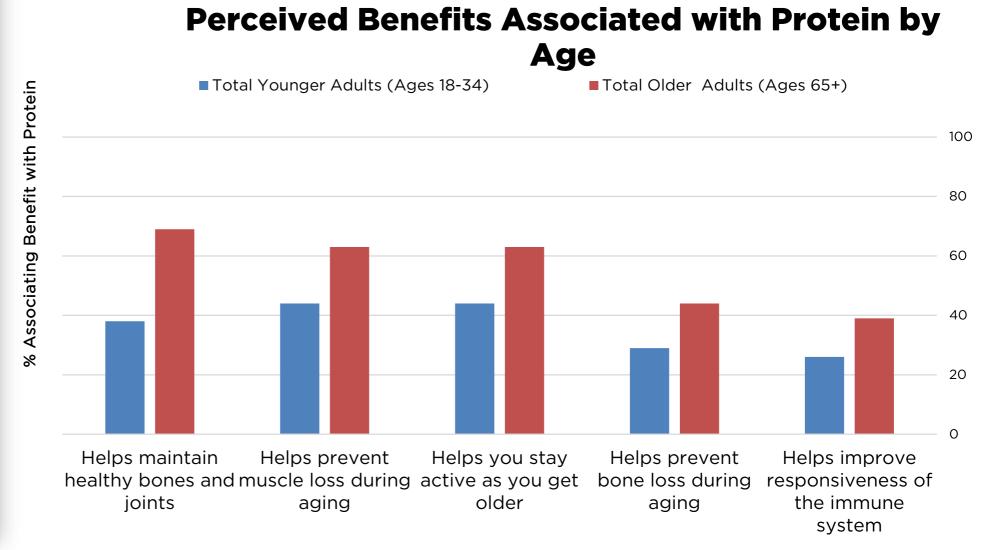
Aligning Protein with Muscle & Joint Support

Health Claims Skew Toward:

- Higher income HH
- Millennials (transparency)
- Baby Boomers

Protein Perceptions:

- 65% perceive that protein helps prevent muscle loss with aging
- 56% perceive that protein helps build/mai ntain muscle strength





Health-Related Opportunity

Sarcopenia – Progressive Muscle Loss

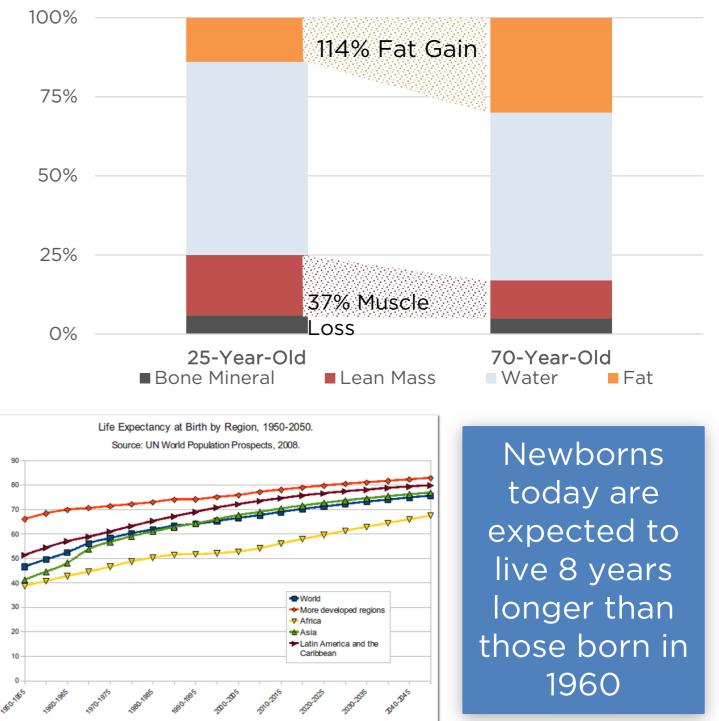
What is Sarcopenia?

- Sarcopenia is the progressive loss of muscle mass, function, and quality driven by the aging process.
- Often leads to diminished strength, activity levels, mobility issues, osteoporosis, and more.
- Between 30 to 60 years of age, the average adult:
 - will gain 1 lb of weight and lose 1/2 lb of muscle annually
 - a total gain of 30 lbs of fat and a loss of 15 lbs of muscle
 - accelerates to 15% loss per decade, after age 70

Population Affected & Why it is Increasing

- Approx. 45% U.S. older adults are affected by Sarcopenia, & increasing as population ages.
- Consumers over age 50 often consume less than the RDA for protein
 - 27% to 41% of women
 - 15% to 38% of men

Average Change in Body Composition



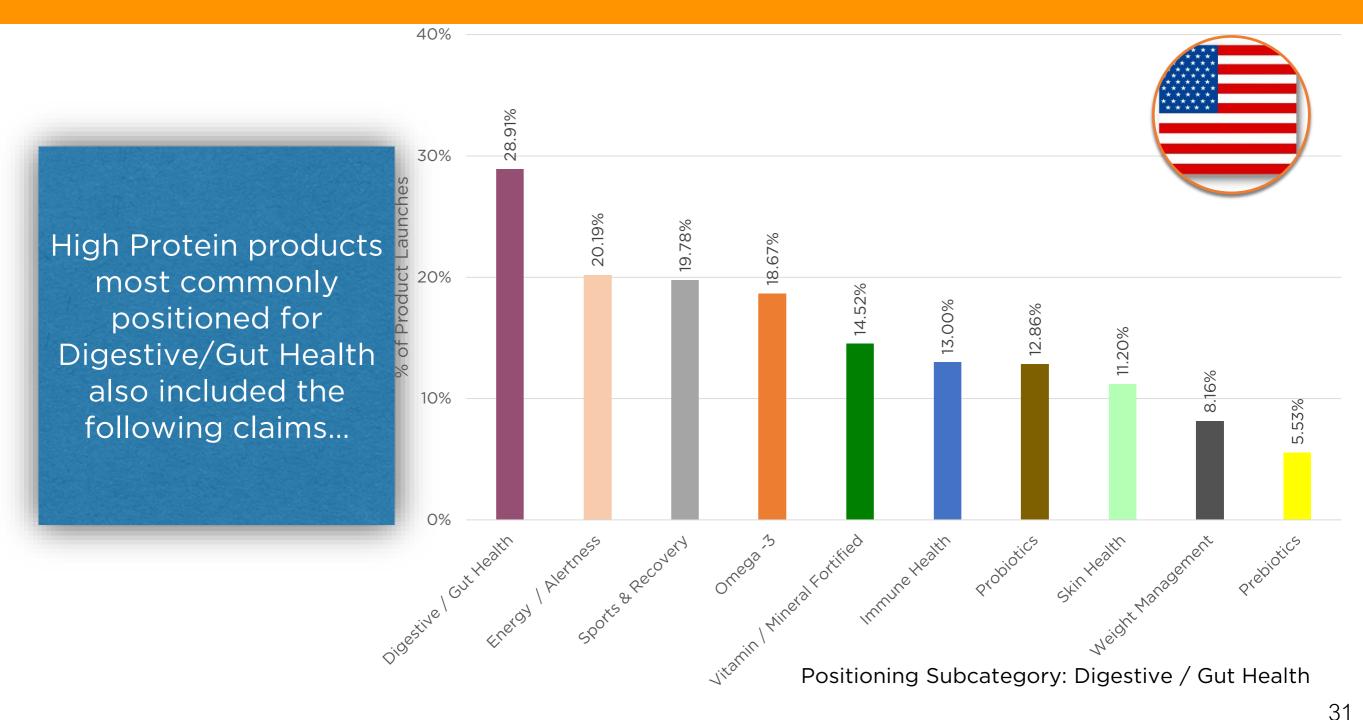
Sources: National Center for Health Statistics; UN World Population Prospects; Janssen I, J American Geriatrics Society 52; 1:80-85, 2004; Innova Market insights, Schock et. al



High Protein Product Launches:

Top Sub-Claims for Digestive Health

U.S. Food/Beverage Launches Containing Pea Protein (2016 – 2017) Positioning Subcategory: *Digestive / Gut Health*

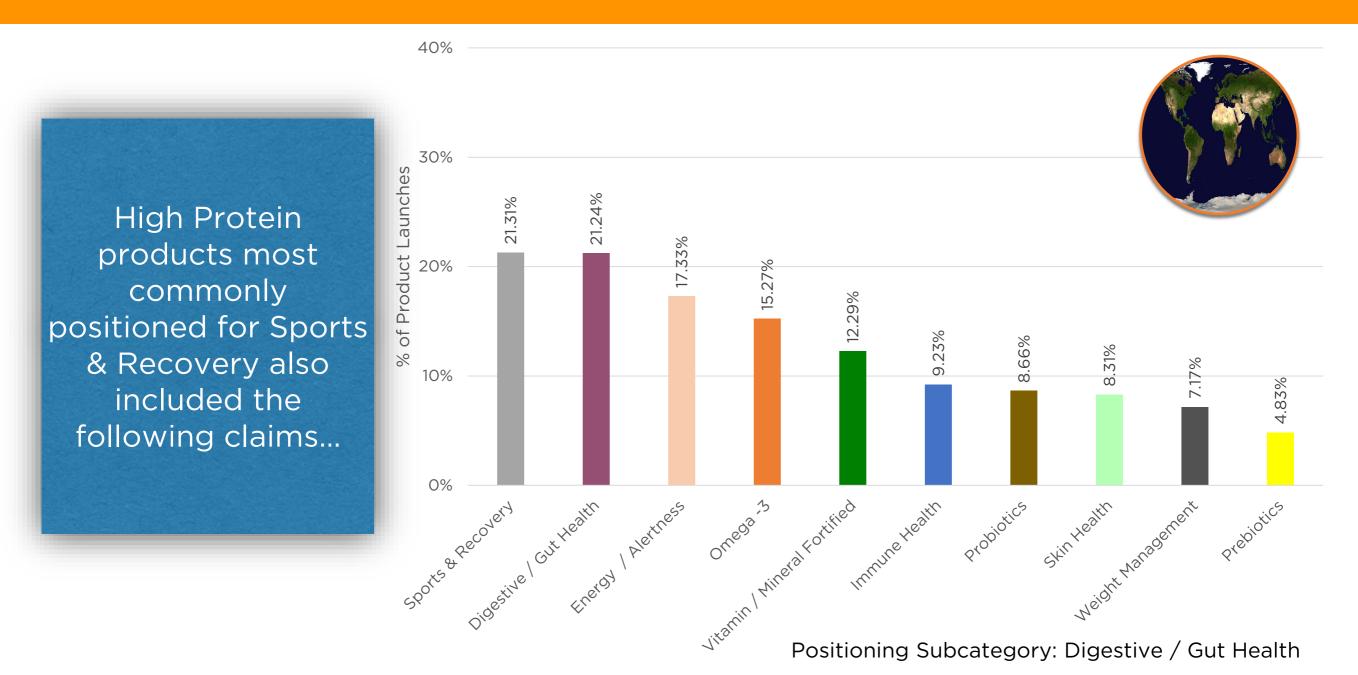




High Protein Product Launches:

Top Sub-Claims for Sports & Recovery

Global Food/Beverage Launches Containing Pea Protein (2016 – 2017) Positioning Subcategory: *Sports & Recovery*

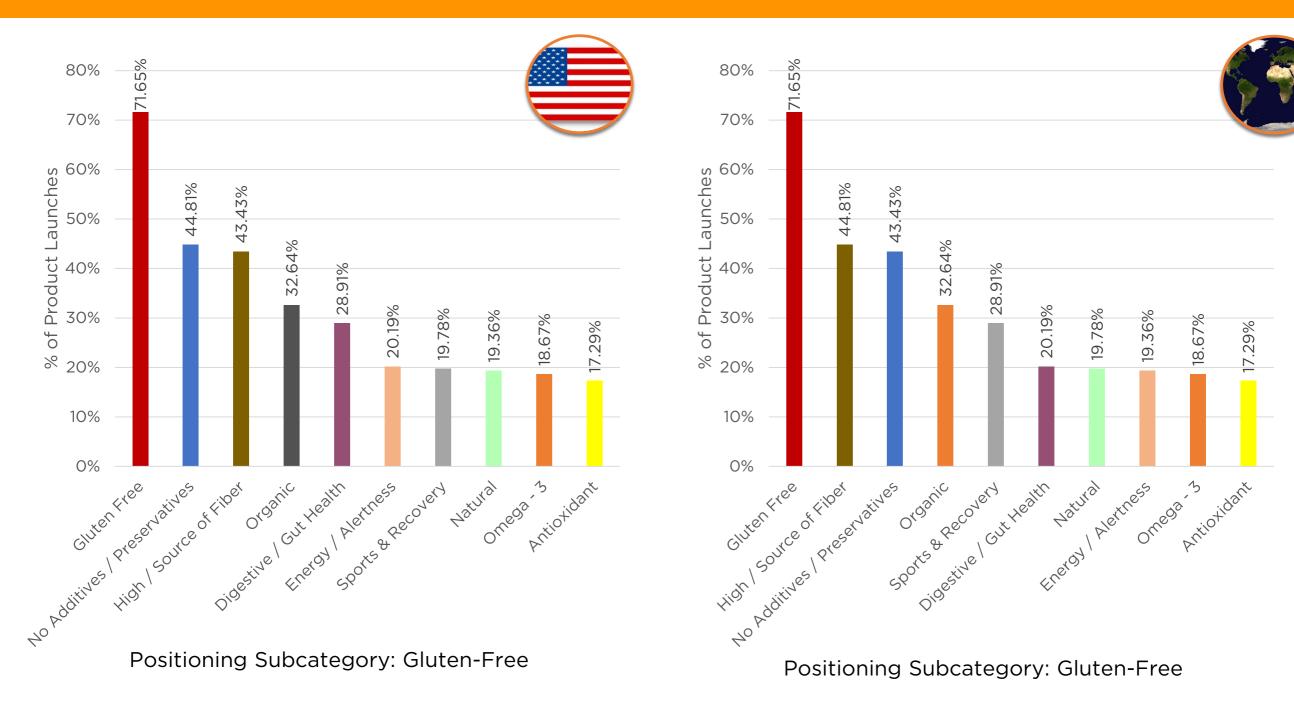




High Protein Product Launches:

Top Sub-Claims for Gluten Free

U.S. & Global Food/Beverage Launches Containing Pea Protein (2016 – 2017) Positioning Subcategory: *Gluten-Free*



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Clinical Trials & Patents

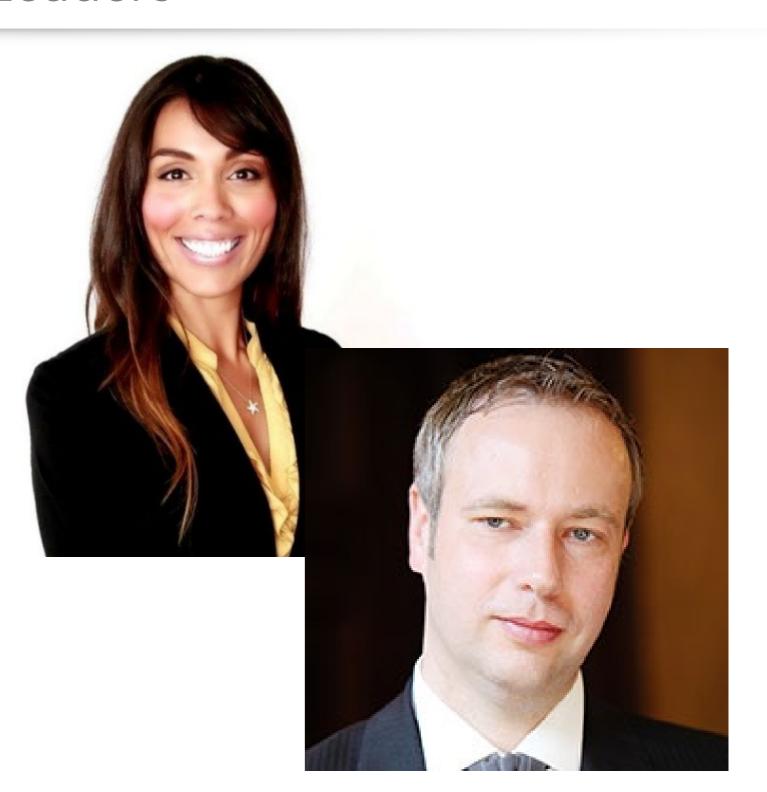
A. Rice vs Whey ProteinB. Consumer EducationC. Patented Claims





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2013, 2018, 2020 Clinical Trials Summary

Rice Protein Muscle Building vs Whey Protein

Three Clinical Studies

One HEAD TURNING Result Helping Even the Playing Field



2013

[†]Nutrition Journal 8 weeks Double blind study

24 collegiate athletes

24g of rice or whey protein 2x/day

Periodized resistance training 3x/week

Both Oryzatein® rice and whey protein equally increased lean muscle mass, power & strength, plus helped exercise recovery.

2018
[†] EC Nutrition Journal
6 weeks
Prospective pilot trial study
11 pro MMA athletes
25g of rice or whey protein 3x/day
MMA training 2x/day, 6 days/week
Both Oryzatein® rice and whey protein equally maintained lean muscle mass.

2020

TBA 8 weeks Double blind study 24 collegiate athletes

24g of rice or whey protein 1x/day

Periodized resistance training 4x/week

Both Oryzatein[®] rice and whey protein equally supported lean muscle mass, even at a low dose

Sports formulations utilizing this claim are covered under Axiom Foods' use patents. Oryzatein[®] is equally as effective as whey protein for increasing and maintaining lean muscle mass



2018 Clinical Trial

Absorption Kinetics of Rice Protein v Whey Results

The Race

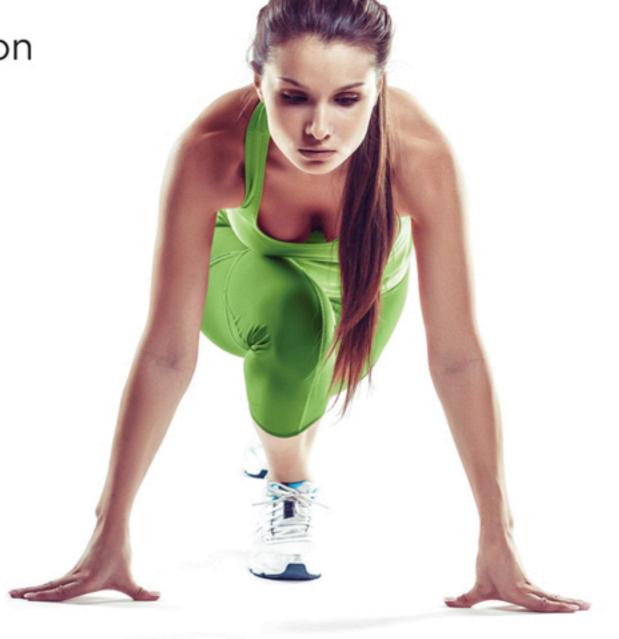
to Leucine Amino Acid Absorption



85 minutes

67 minutes

Leucine, the key amino acid for muscle building, absorbs *almost 30% faster* from rice protein than whey protein.*





Clinical Research with a Consumer Message

Turned Into Consumer Education Programs

Annual Education Program

- Plant Protein Month is an opportunity:
 - To educate consumers through



Plant Protein Month Health & Wellness Website 20,539 like this

 To educate retailers (and consumers) through retail display contest



 Get brands involved, which features plant proteins in their products



Clinical Trial Based Education Program

 Plant vs Animal Challenge turns clinical trials into something consumers can relate to, to benefit the entire plant protein industry



Could Vegan Protein Be Just As Effective As Whey for Building Muscle?

Whey has long been called the muscle-building king—but new research says, "Be humble, sit down."



New study with UFC fighters shows plant-based protein produces same results as whey in athletes





Andre Soukhamthath defeated Luke Sanders in December by second-round TKO. He credits a shift to plant-base protein as a factor in the win. Kyle Terada-USA TODAY Sports

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Intellectual Property & Licensing

Only if you formulate with Oryzatein[®] Rice Protein can you make these claims!



Country	Patent No.	Issue Date		
United	9,820,504	11/21/17		
States				
United	9,907,331	03/06/18		
States				
Australia	2014225786	01/25/18		
China	ZL	04/10/18		
	201480013156.1			
Hong Kong	HK1213441	11/23/18		
Macau	J/003136	09/24/18		
New Zealand	711956	10/02/18		
And more pending				

Patents

Method of Use Patents:

Oryzatein is the only rice protein that can be used in Sports Nutrition with the following claims*, as good as whey:

- 1. Build muscles (lean body mass)
- 2. Increase strength
- 3. Increase power
- 4. Increase endurance
- 5. Increase exercise recovery

6. increased rate of absorption of leucine – an essential branched chain amino acid triggering muscle growth

*When rice protein is the single source of protein

Proprietary & Novel Patent-Pending Processes

- Tasteless pea protein
- Suspension Grade process adaptation for other proteins
- Rice Milk
- Organic heavy metal chelation
- Ultrafiltration & Microfiltration for rice protein separation

Licensing Opportunities Available 39 AXIOM FOODS CONFIDENTIAL. Do not share without permission.



Intro to Protein Where Do They Come From?

All plants have some protein but at different percentages

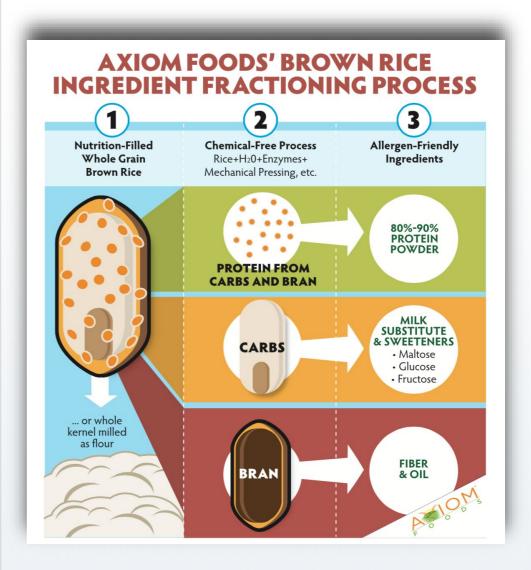
- Some plant proteins are just dried and ground whole plant flour that is typically only 25-50% concentrated protein
- Axiom Foods' plant proteins are typically 58% to 80%+ because they are separated (AKA fractioned) from the plant and concentrated
- If any protein powder is concentrated above 80% it is referred to as an "isolate"
- The concentration of protein in peas is approximately 5:1 so it would take eating 5 bowls of peas to consume the protein in one bowl of protein powder.

All concentrated plant proteins are part of a sustainable process that uses the whole grain, seed, legume or nut.

- The part of the plant that isn't protein is a 2nd food, beverage or nutraceutical ingredient that is often an oil, starch, sugar or fiber.
- Originally discarded, protein powders originated from food waste streams. Whey protein is a by-product of cheese manufacturing which needs the curds but discards the whey

Axiom Foods created the most minimal and natural fractioning processes that do NOT use petroleum by-products such as hexane

- ALL Soy proteins have been fractioned out of the soy bean using lowcost hexane, with some recent exceptions.
- Rice Protein: Brown rice is ground, mixed with water, treated with carbohydrate-breaking enzymes to remove the starch leaving a protein rich "cake" behind which is then concentrated and dried into powder
- Pea Protein: Dried field peas are ground, mixed with water, mechanically separated via centrifuge to remove the starch leaving a protein rich "cake" behind which is then concentrated and dried into powder.



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Intro to Protein Choosing Between Proteins

Whey typically has:

- Cholesterol
- Lactose/allergens
- Contamination with growth hormones/antibiotics
- Artificial additives including sweeteners

Although the whey industry is trying to address these things.

Plant proteins are naturally:

- Free from cholesterol
- Low-fat and free of saturated fat
- Sustainable
- Low carbohydrate
- Part of most any type of diet plan or lifestyle (vegan, low FODMAP, Keto, food allergies, sports, etc.)

Plant proteins can be perceived as:

- Taste/texture differences BUT things are improving and the positives far outweigh the negatives
- Muscle building differences BUT several clinical studies show rice protein is as good as whey protein at building muscle / power / strength and actually contains a faster absorbing Leucine, the AA that triggers muscle building

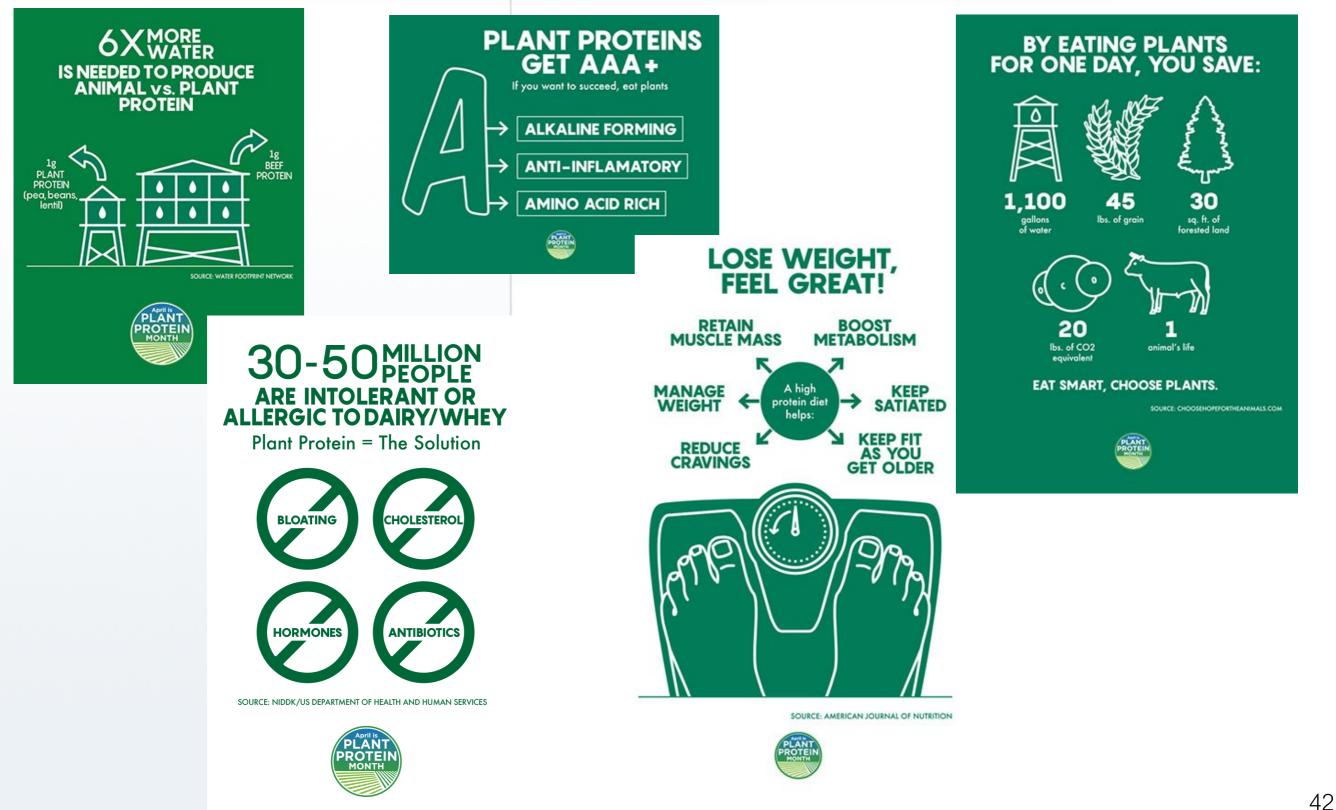
	Brown Rice	Pea	Sacha Inchi	Hemp	Soy	Whey	Egg White
Derived from the Whole Grain	√						
Raw/Low Heat Option	\checkmark	\checkmark		\checkmark			
Allergen-Friendly	\checkmark	\checkmark	\checkmark	\checkmark			
Non-GMO	\checkmark	\checkmark	\checkmark	\checkmark			
Vegan	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark		
Naturally Cholesterol Free	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark		
Hexane Free	\checkmark	\checkmark	\checkmark	\checkmark		\checkmark	\checkmark
Phytoestrogen Free	\checkmark	\checkmark	\checkmark	\checkmark		\checkmark	\checkmark
Clinically Shown to Build Lean Muscle & Aid Exercise Recovery	V	\checkmark				\checkmark	\checkmark
Clinically Shown that Leucine Absorbs Faster than Leucine from Whey protein	~						
Organic Readily Available	\checkmark		\checkmark	\checkmark	\checkmark		
High BCAAs**	\checkmark	\checkmark				\checkmark	\checkmark
High Omegas			\checkmark	\checkmark			
Naturally Hormone Free	\checkmark	\checkmark	\checkmark	\checkmark			
Environmentally Friendly	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark		

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Plant Protein Myth Busting

Visit PlantProteinMonth.com for Shareables



Questions? Contact:

Rick Ray (916) 813-1878 <u>Rick@AxiomFoods.com</u>



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