



SOY - From Zero to Hero

June 3rd 2025



Agenda

- ADM Introduction
- Soy –From Zero to Hero
- Processing Soy Proteins to Create Functionality
- Innovations Presented During the Workshop



Today's Speakers



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ADM by the Numbers

FUNDAMENTALS



~700

Facilities



67

Innovation
Centers



~300

Food & Feed
Processing Locations



>200

Countries Served



~440

Crop Procurement
Locations



42,000

Employees

FINANCIALS



\$94B

CY23 Revenue



~\$39B

Market Cap
as of 12/31/2023



\$5.9B

Adjusted Segment OP
for CY23



92

Years of Consecutive
Dividends and **51 years of
Increasing Dividends**



\$6.2B

of Adjusted
EBITDA in CY23



\$6.98

Adjusted EPS
in CY23

CREDENTIALS



1902

Founded



ADM

NYSE Since 1924



A

Credit Rating

Note: Adjusted Segment OP, Adjusted EBITDA, and Adjusted EPS are Non-GAAP measures – see notes in appendix

ADM's Soy Protein Portfolio

Line Name	Protein Content	Recommended Application	Sourced
 ProFam®	90%+	<ul style="list-style-type: none"> • Isolated soy protein • Nutritional beverages/snacks/cereal/dairy alt./egg replacement in bakery/meats and meals 	US
 Arcon®	65-90%	<ul style="list-style-type: none"> • Soy protein concentrate • Meats/bars/snacks/meals/soups/vegan/low fat 	US, BRA, EU
 Arcon® T	60-70%	<ul style="list-style-type: none"> • Texturized soy protein concentrate • Meat/snacks/bars/vegan/soups 	US
 TVP®	50-60%	<ul style="list-style-type: none"> • Texturized soy flour • Meats & Meat alt/snacks/cereals 	US
Flour & Grits	50%	<ul style="list-style-type: none"> • Soy flour (Toasted, EAF) • Bakery/bars/cereals/meats/vegan 	US
Specialty HI	<65%	<ul style="list-style-type: none"> • Soy flour (Organic) • Expeller press defatting • Bakery/pasta/cereals/bars/soy sauce 	US
 AccelFlex®	10-80%	<ul style="list-style-type: none"> • Texturized inclusions, Crisps, whole grain, gluten free, fiber, legumes, custom products • Snacks/bars/cereals/meats/nutrition/bakery 	US, EU

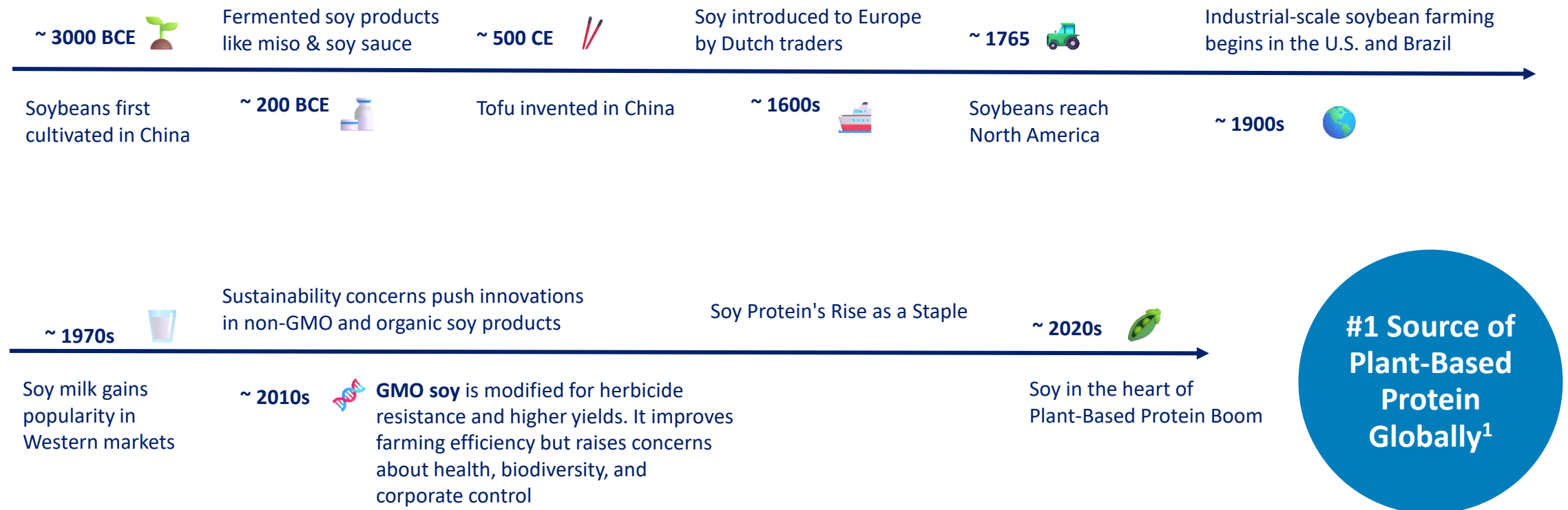


SOY - From Zero to Hero



The Soy Story Begins...

Over the past five decades, consumer perceptions of soy have undergone a significant transformation. Initially, soy was primarily regarded as a staple in Asian diets with little attention from Western consumers. However, in recent years, soy has gained widespread recognition for its nutritional benefits, sustainability, and versatility. As plant-based diets become more mainstream, soy has emerged as a key protein source, sparking both enthusiasm and debate over its health effects, environmental impact, and role in modern nutrition.



Source ¹Frost & Sullivan

Soy is Very Polarizing

Ultra processed
foods

GMO

Phytoestrogens

Antinutrients

Deforestation

Digestive issues

Plant-Based
and Vegan-
Friendly

Complete
protein

Versatile & Tasty
plant-protein

Sustainable
food source

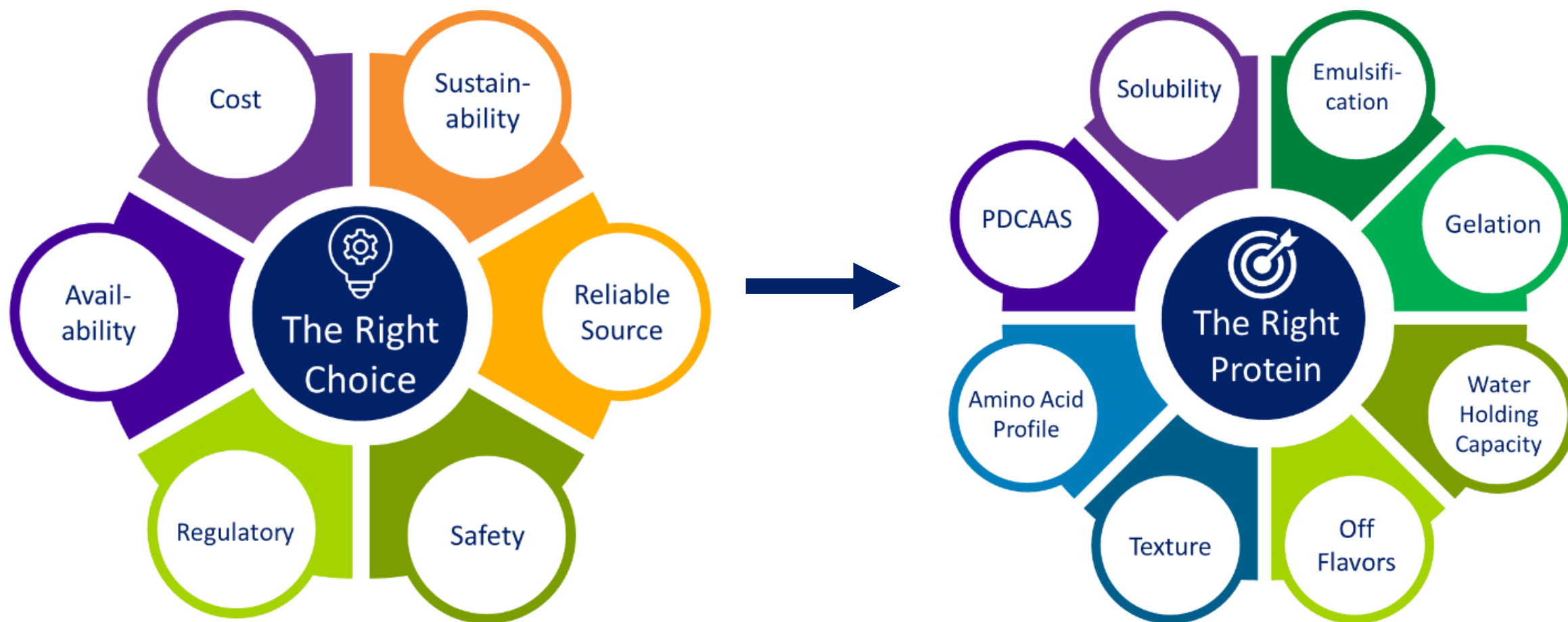
Healthy for
Heart

High in nutrients
(vitamins, minerals,
etc.)



Industry Needs for Plant-Based Proteins

Ingredient Complexity



The Strength of SOY

Plant-Based Consumers' Perceptions



2/3

of global consumers
perceive Soy as
Healthy/Nutritious¹

70%

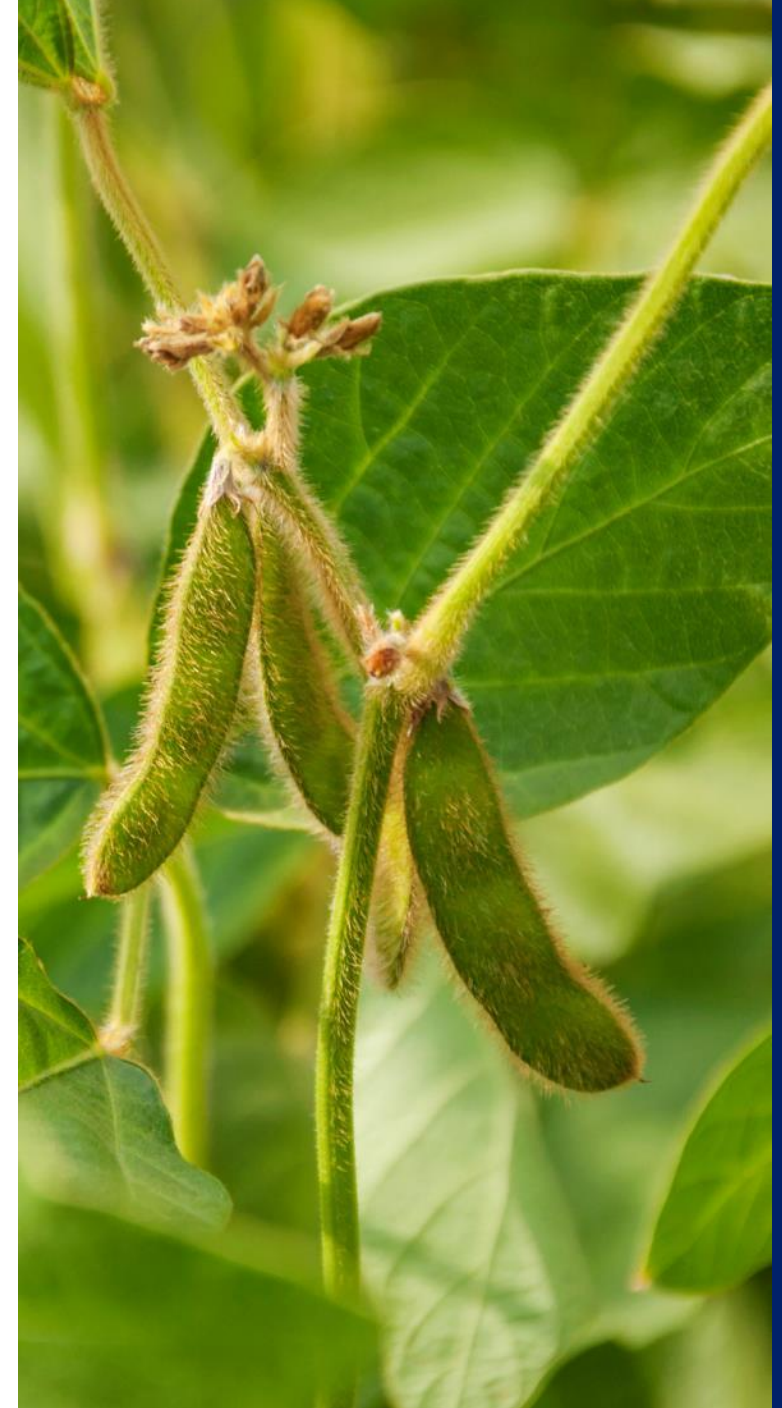
of global consumers say taste is
important when purchasing food
and beverages, ranking the second
most important after price²

#1

Locally sourced is the number one
product characteristic for German
consumers that would increase
likelihood to buy products made
with plant protein¹

83% of
consumers say
soy protein is a
good source of
protein for
building/maint
aining muscle¹

Soy has the 4th
highest
awareness and
the highest
consumption
among protein
sources¹



Source ¹ ADM Outside VoiceSM Global Plant Protein Consumer Discovery Report, 2025 ²ADM Outside VoiceSM Global Lifestyle Report, 2025,

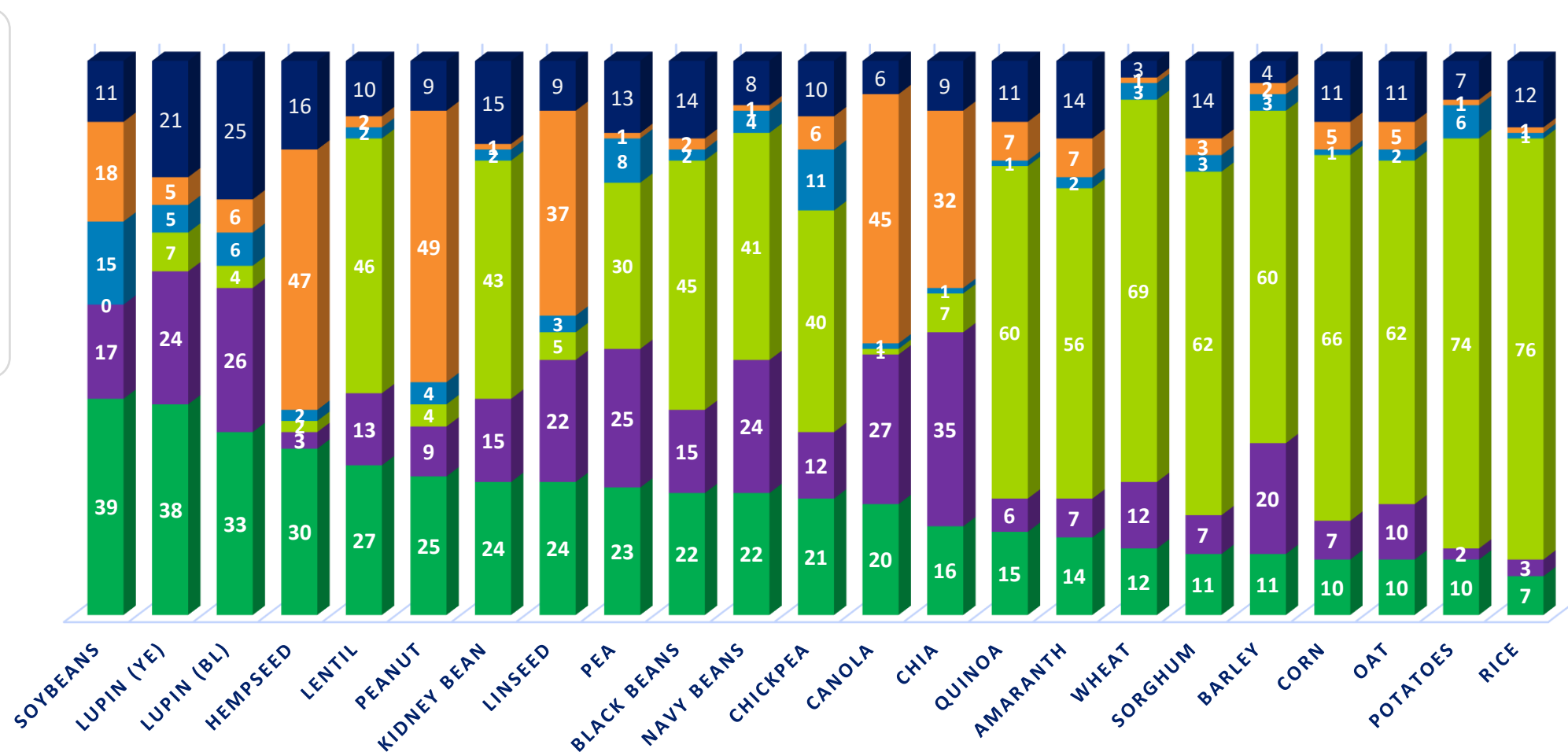


Processing Soy Proteins

How it's made from bean to protein ingredients



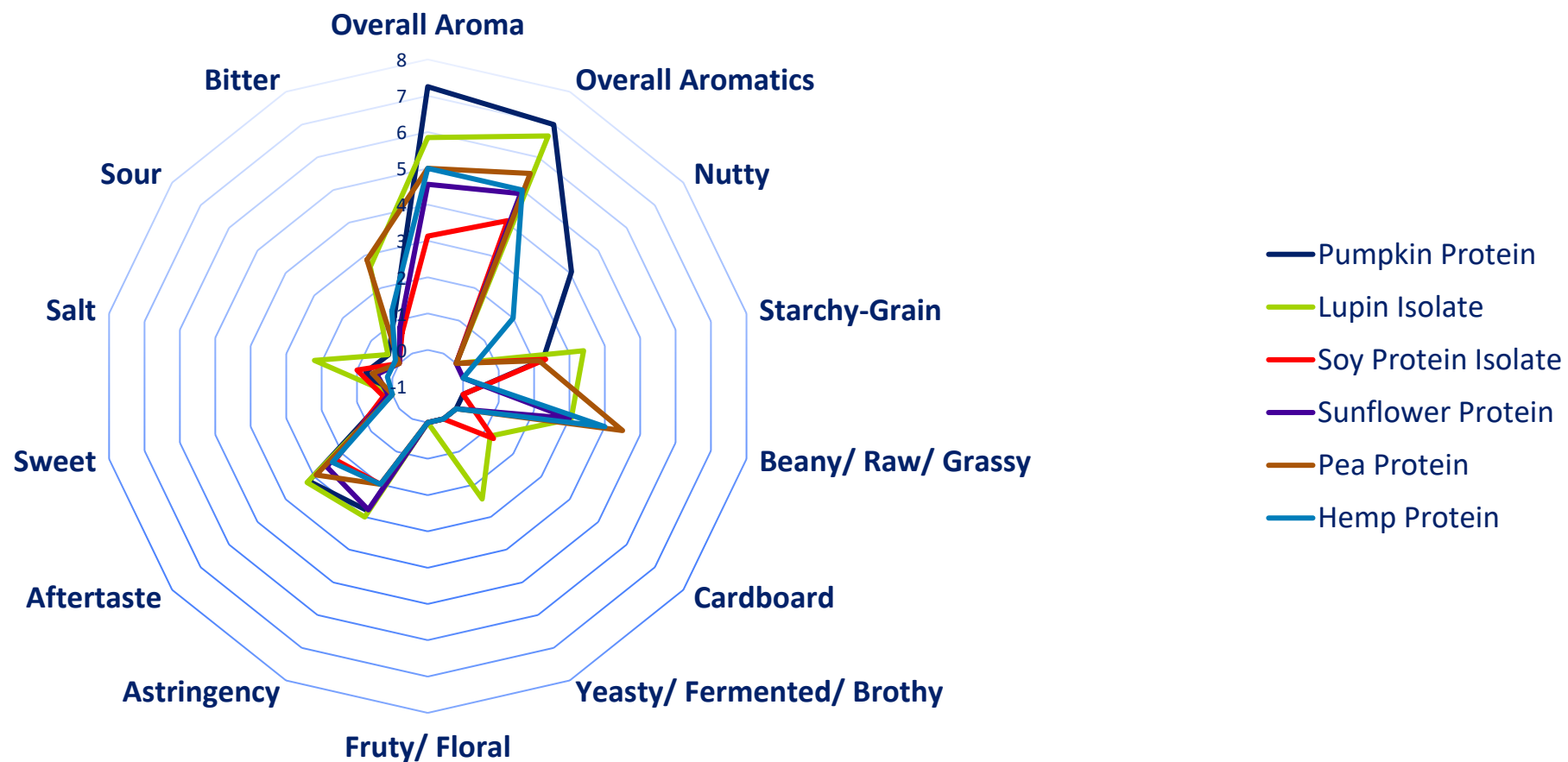
Not All Proteins are Created Equal Macronutrient Composition



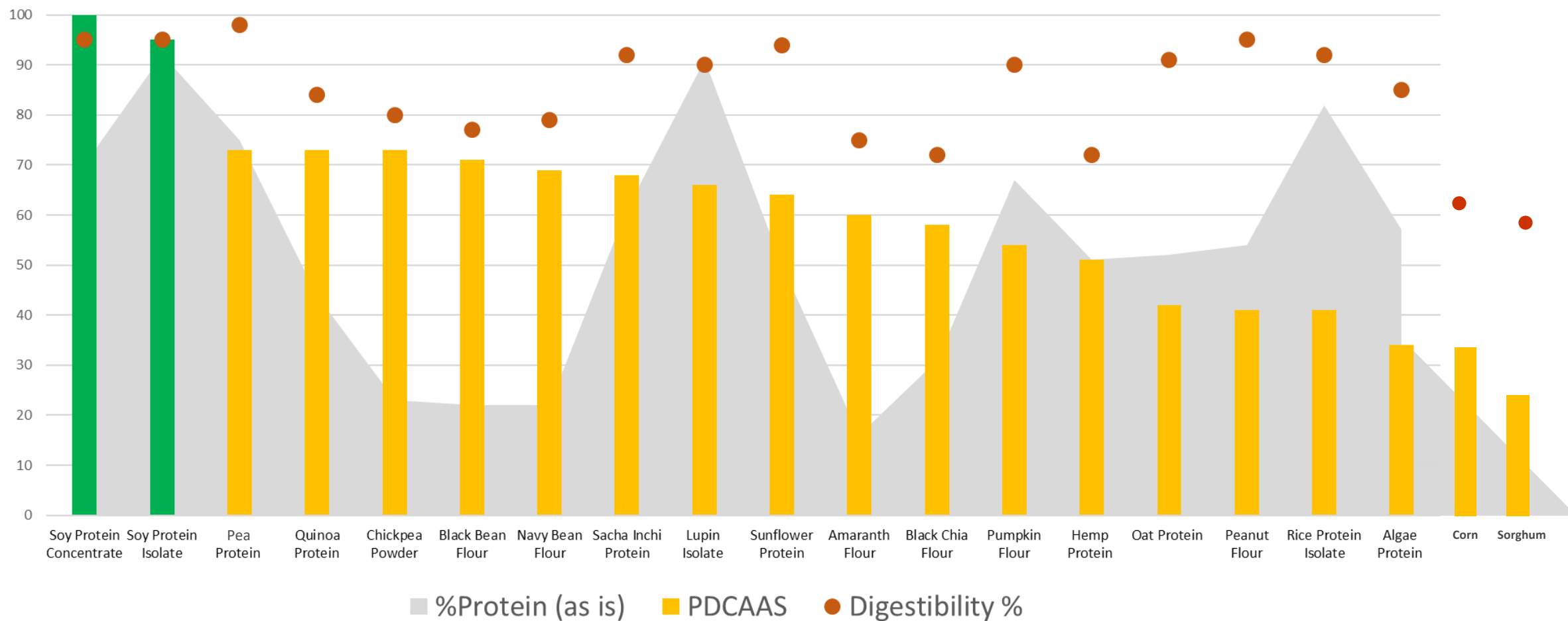
References: 1 - USDA National Nutrient Database for Standard Reference 2 - 2011 J. Appl. Poult. Res. 20 :95-101 & Czech J food Sci; 29, 2011 No 3: 203-211 3 - FAO-INRA-Cirad. Feedipedia, & Nutiva 4 - FAO and USDA

Flavor Challenges of Plant Proteins

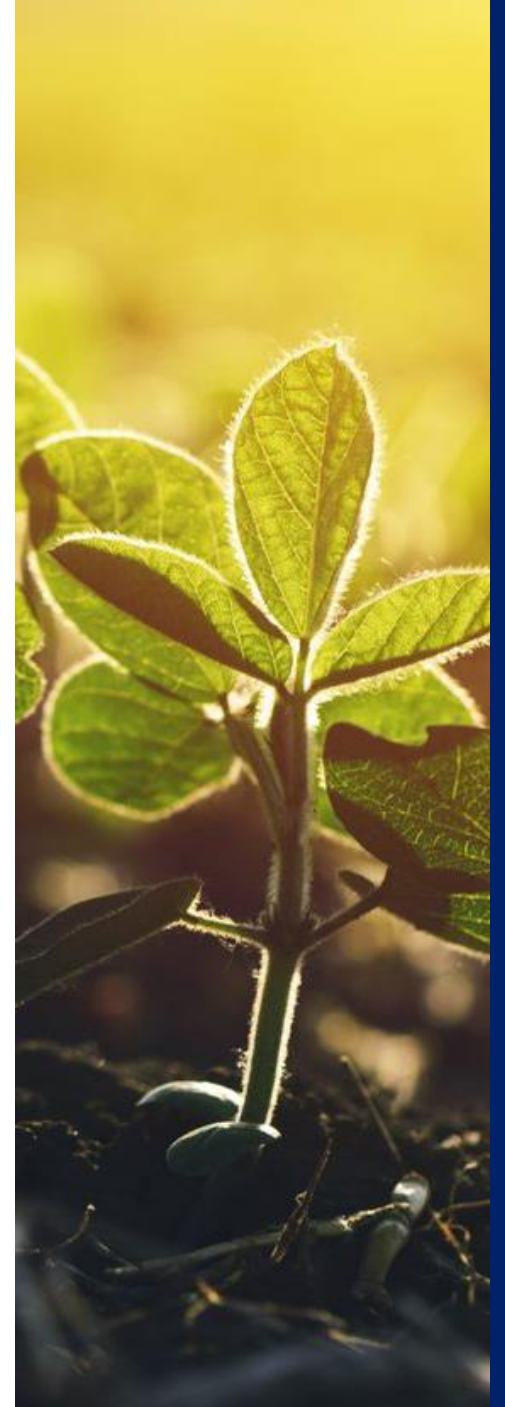
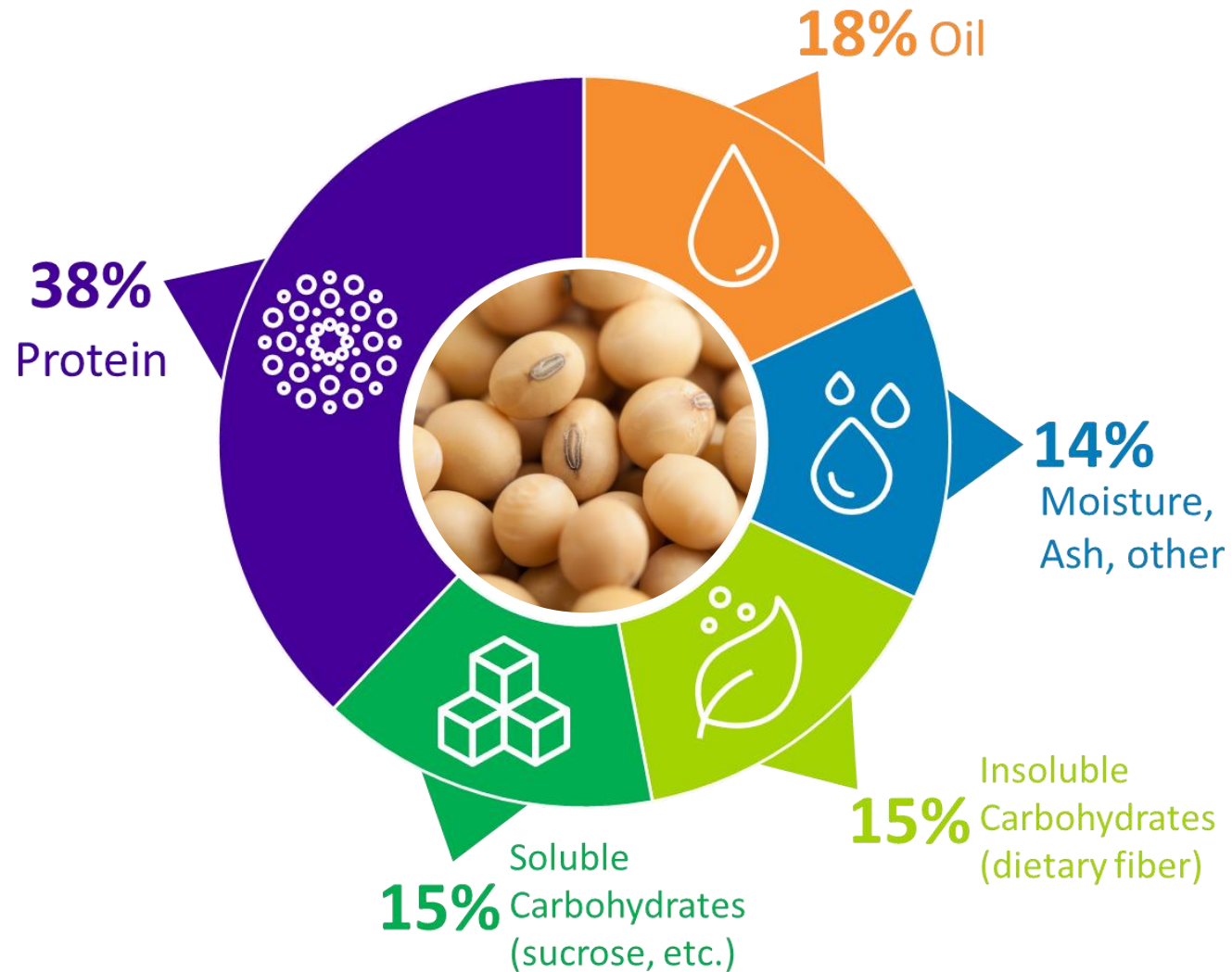
Soy Protein Isolate – Lower Flavor Challenges than Most Plant Proteins



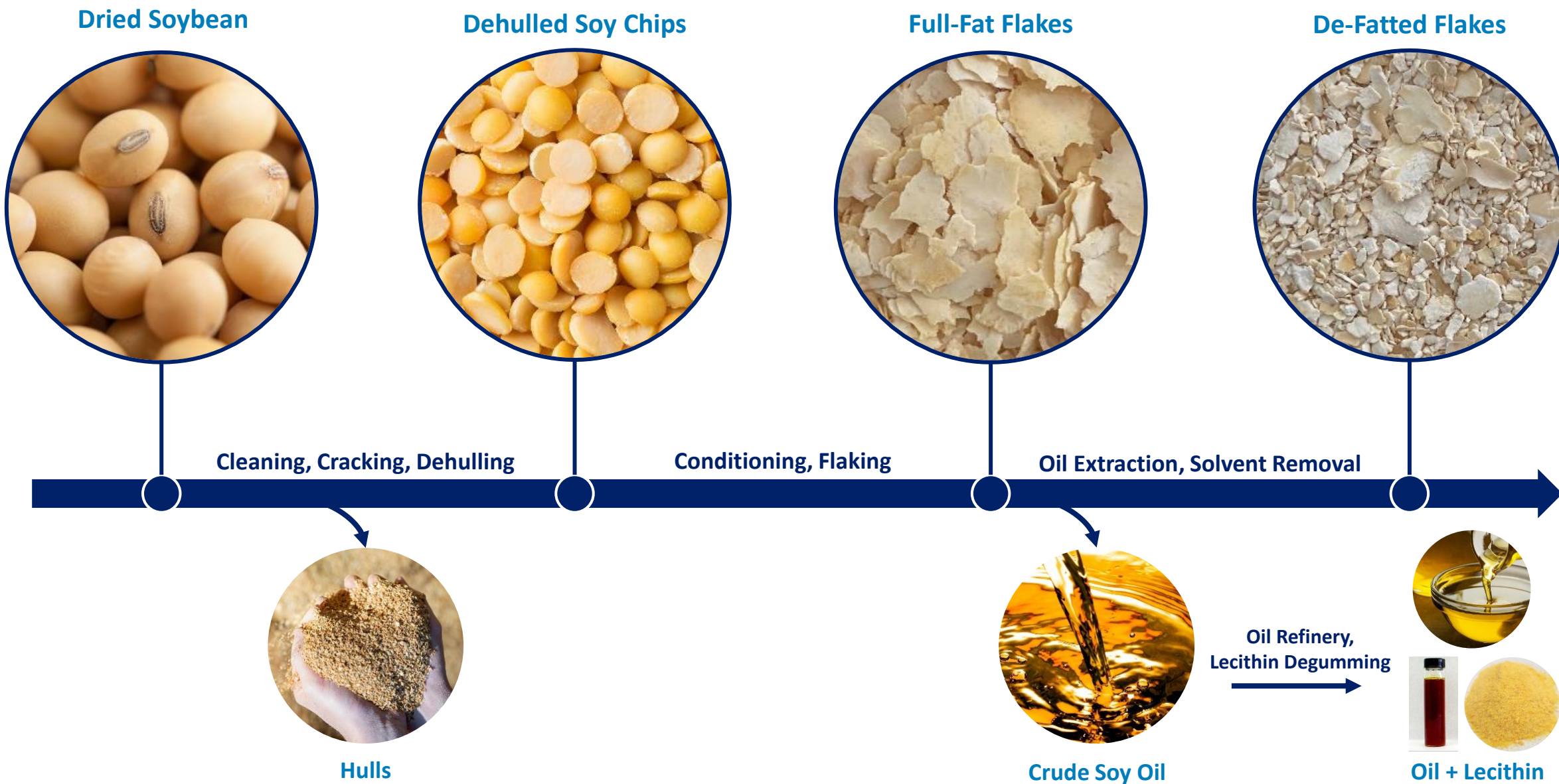
Plant Protein Nutritional Quality of Various Sources



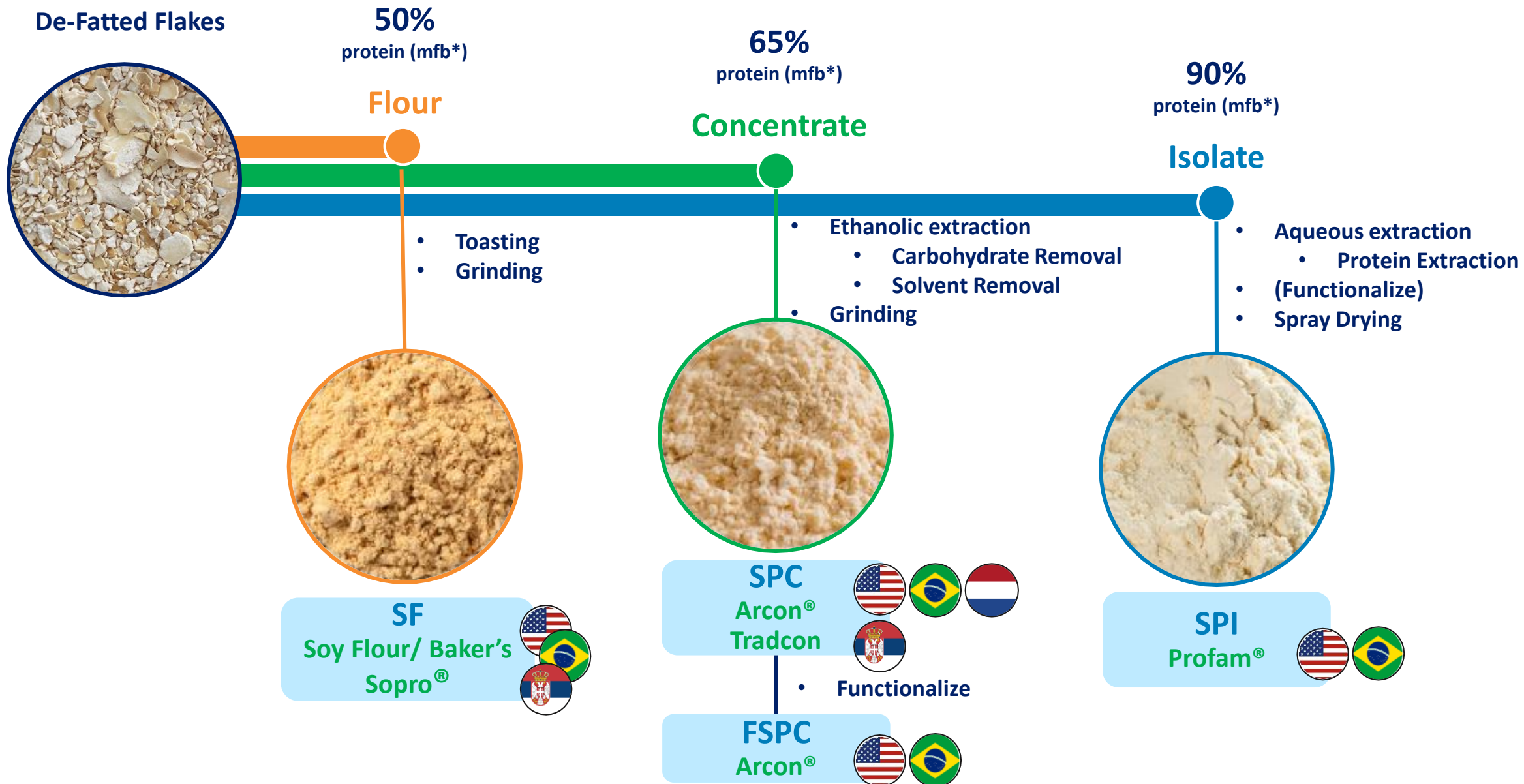
It starts with the Soybean



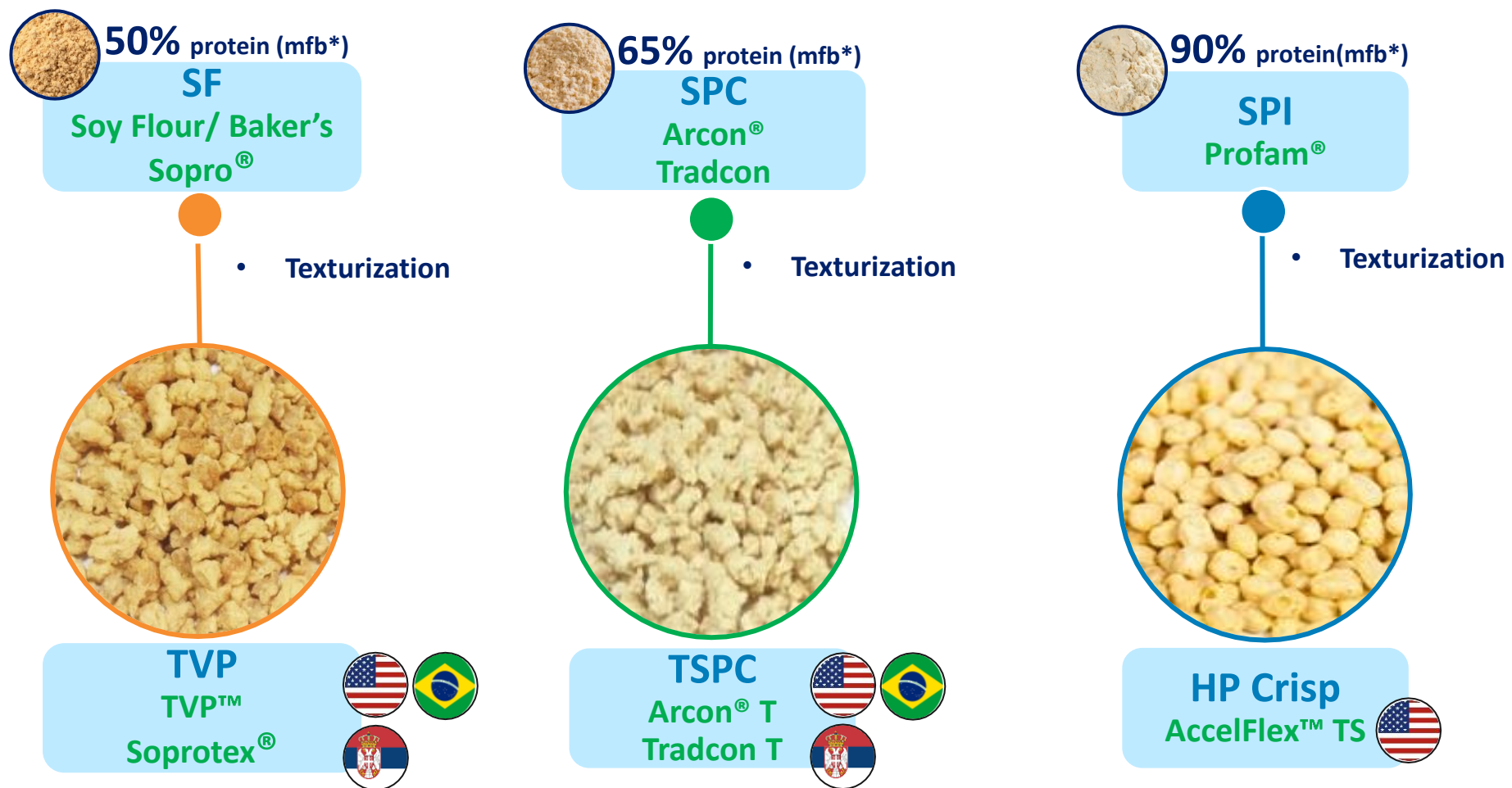
ADM Soybean Processing Flow



Processing ADM Soybean Protein



Processing ADM Soybean Texturates





Tuning Functionality

Through Processing



Each Food Formulation Has Different Needs

Protein Needs per Type Applications

Meats

- Emulsification
- Water binding
- Gelation
- Texture
- Dispersibility

Soups & Sauces

- Viscosity
- Emulsification
- Moisture
- Retention

RTD Beverages

- Solubility
- Viscosity
- Heat stability
- Flavor & color
- Nutritional quality

Meat Alternatives

- Emulsification
- Water binding
- Gelation
- Texture
- Flavor & color
- Nutritional quality

Dairy Alternatives

- Gelation
- Texture
- Emulsification
- Viscosity
- Flavor & whiteness
- Nutritional quality

Snacks

- Extrudability
- Texture
- Viscosity

Bakery

- Film formation
- Water binding
- Foaming
- Browning

Powdered Beverages

- Dispersibility
- Foaming
- Flavor
- Nutritional quality

Nutrition Bars

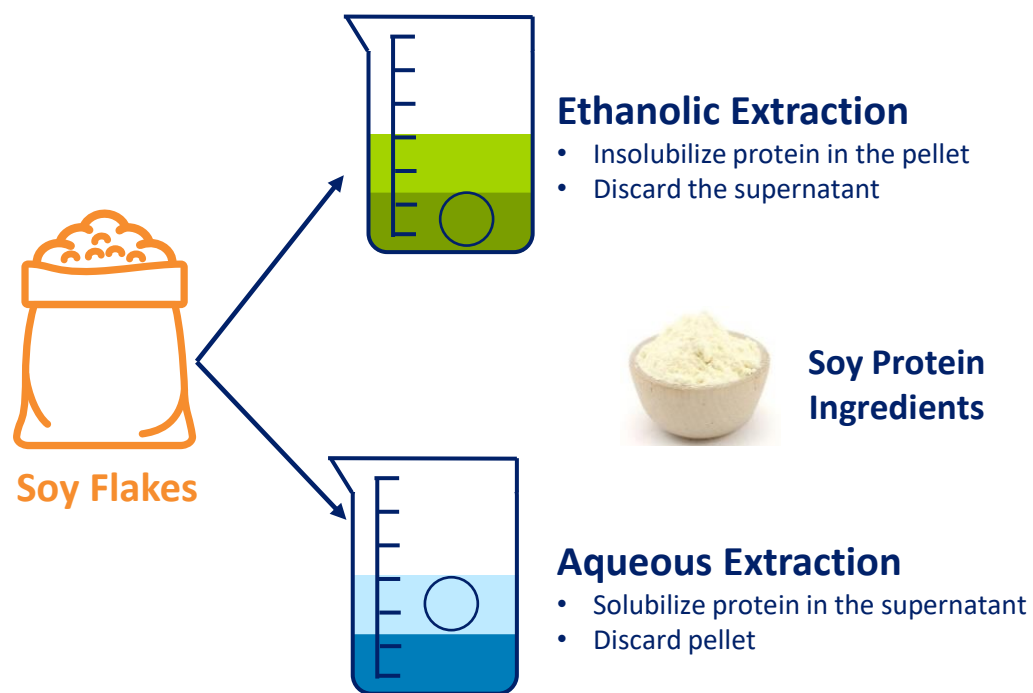
- Very low water binding
- Texture
- Nutritional quality
- Flavor

Egg Substitutes

- Foaming
- Gelation
- Flavor & color

Differentiating Proteins at the Protein Concentration Step

Impact of alcohol vs aqueous extraction on protein functionality



Protein Functional Properties

SPC

- Proteins not soluble, but easily dispersible
- Proteins in contact with organic solvent leads to the exposing of hydrophobic groups
- Proteins tend to have better emulsification and foaming functionality
- Non gelling

Applications:

- Extrusion, Meat Extension, Meat Alternatives, Meals, Soups etc.

SPI

- Soluble proteins
- Good water binding
- Good gelation after heating
- Viscosity

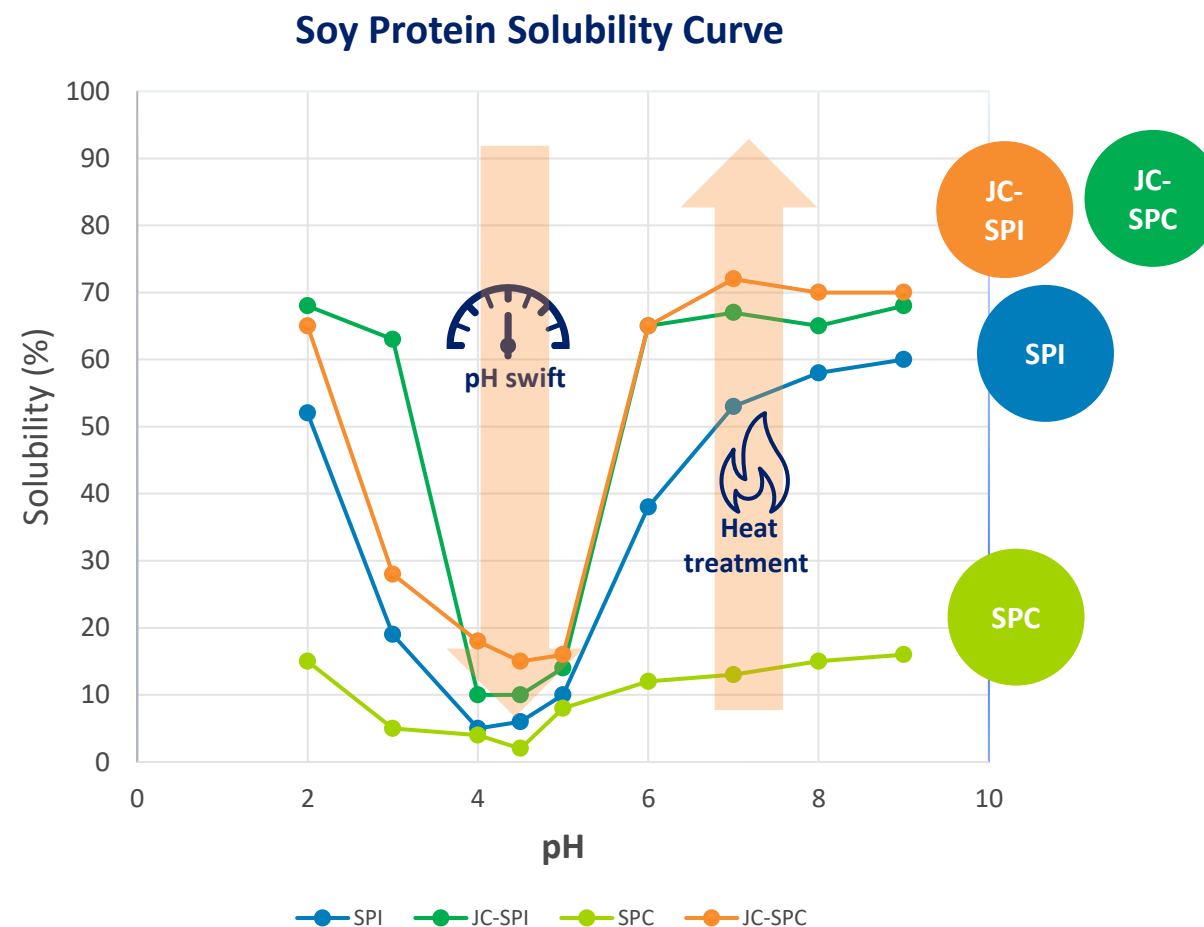
Applications:

- Nutritional Beverages, Dairy Alternatives, Infant Formula, Meats and Meals etc.

Further Tuning of Protein Functionality

How do we produce SPC suitable for plant-based cold-cuts?

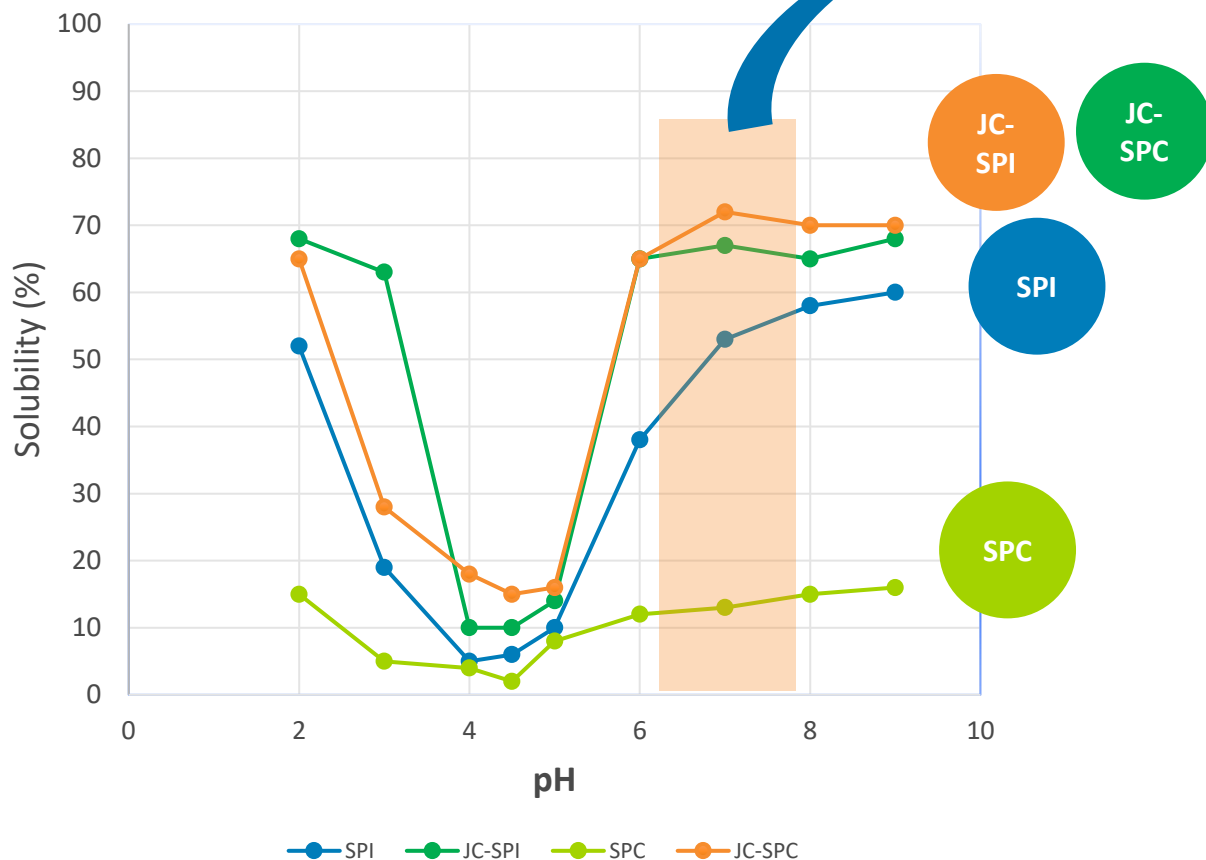
How do we design SPI for high protein bars?



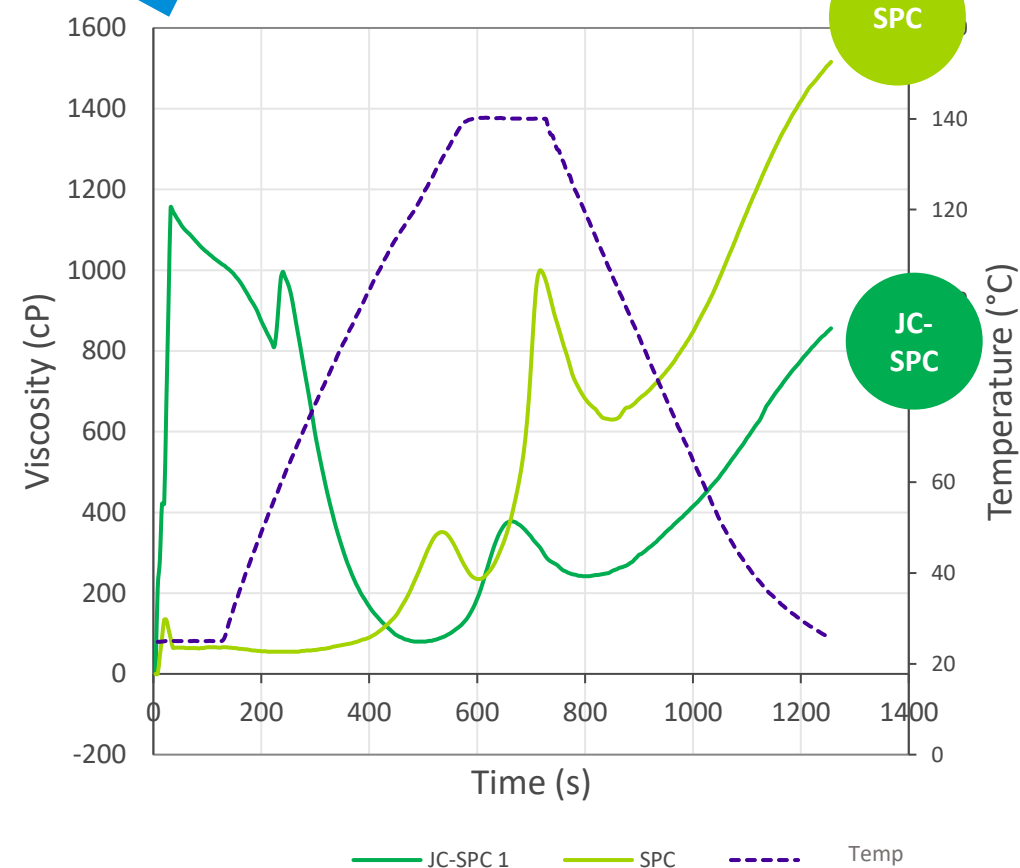
Graph adjusted from Wang & Johnson (2001), JAOCS, 78 (2), <https://doi.org/10.1007/s11746-001-0242-y>

Protein Functionality affects Structuring Behavior

Soy Protein Solubility Curve



Rapid Visco Analysis



Isolates 90%

ProFam® 974

ProFam® 781

Arcon® SM

Arcon® S

Tradcon F

Sopro® UTB

Sopro® TB

Water washed

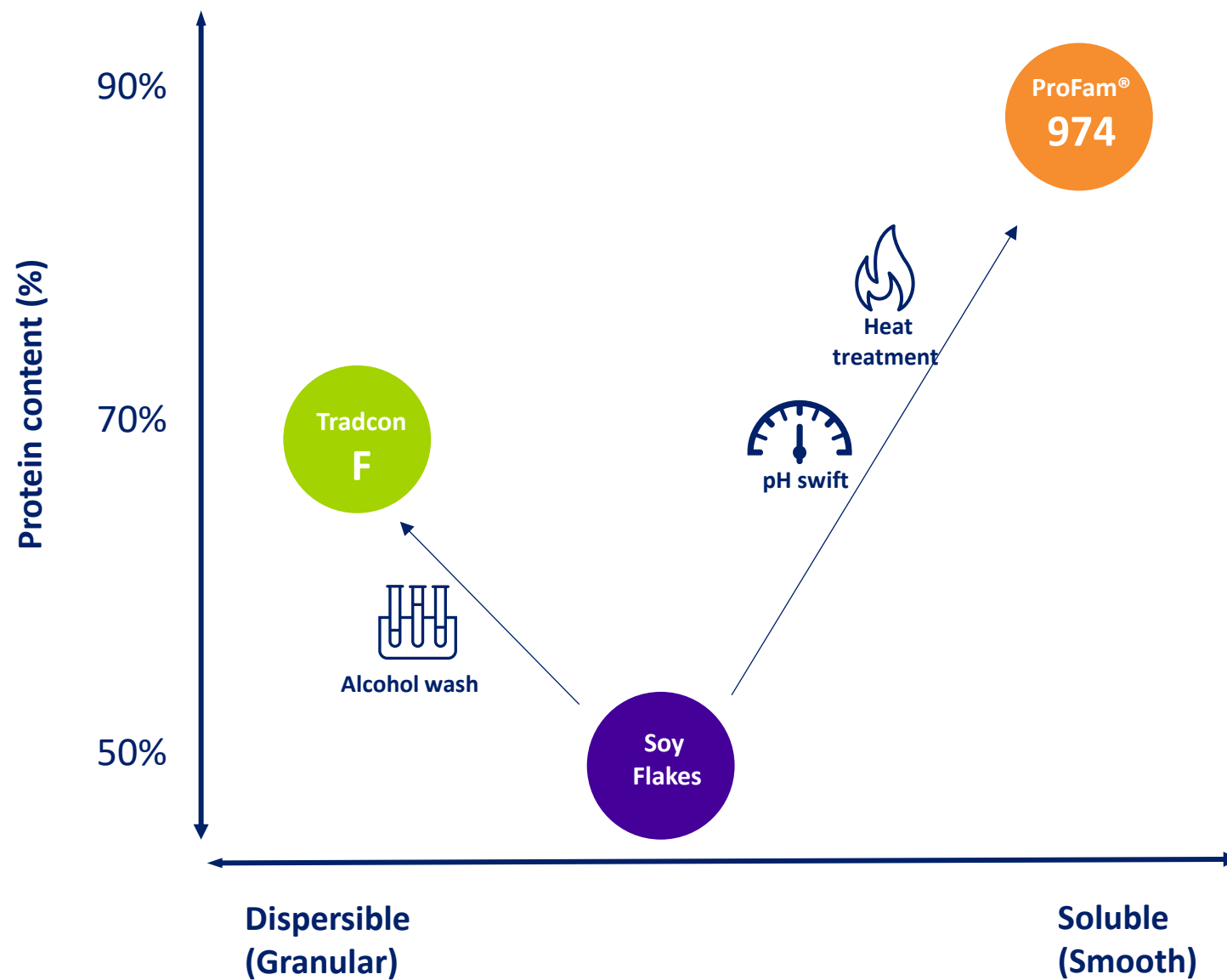
Concentrates 65%

Ethanol washed

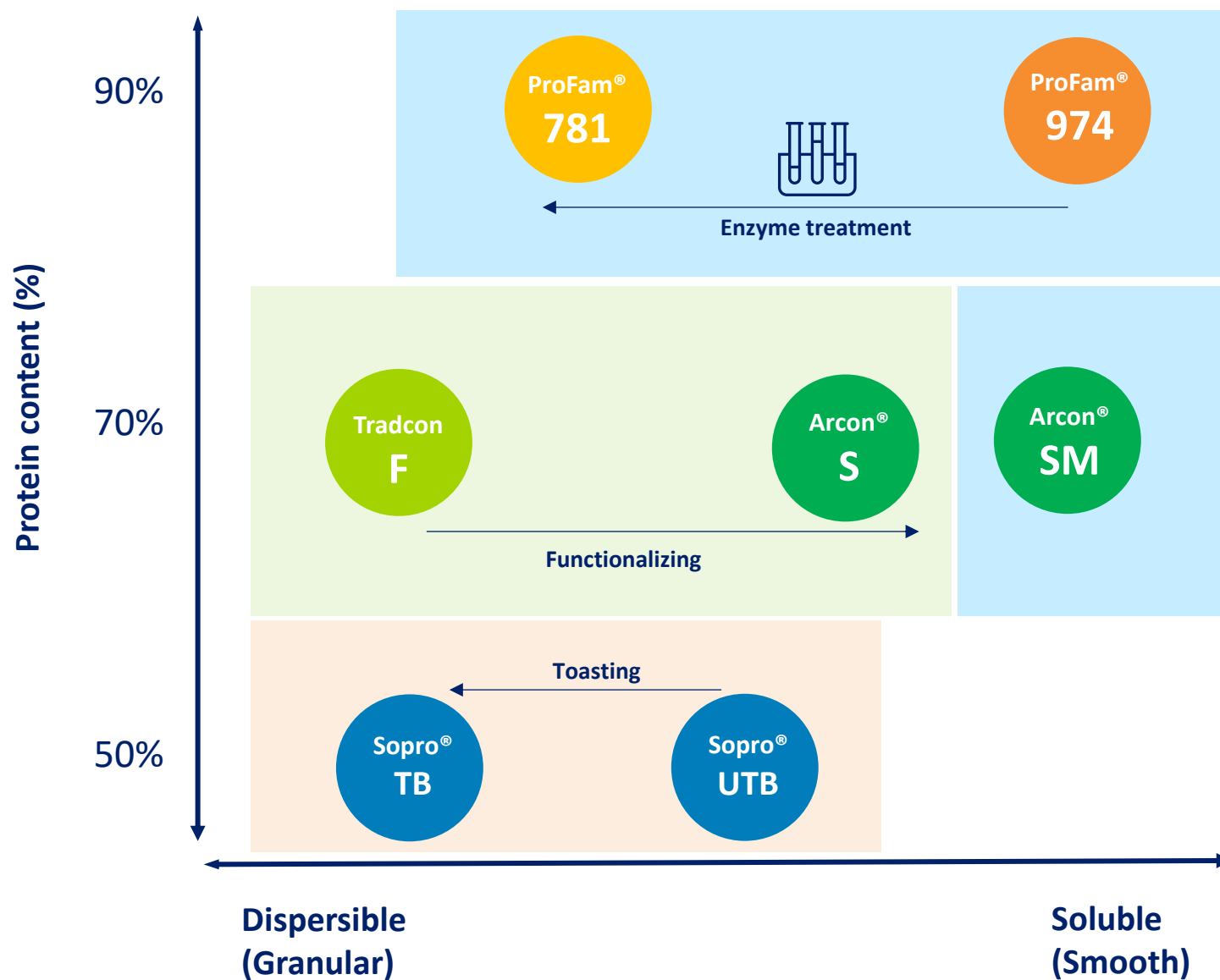
Flours 50%

Only Hexane defatted

Solubility vs Dispersibility



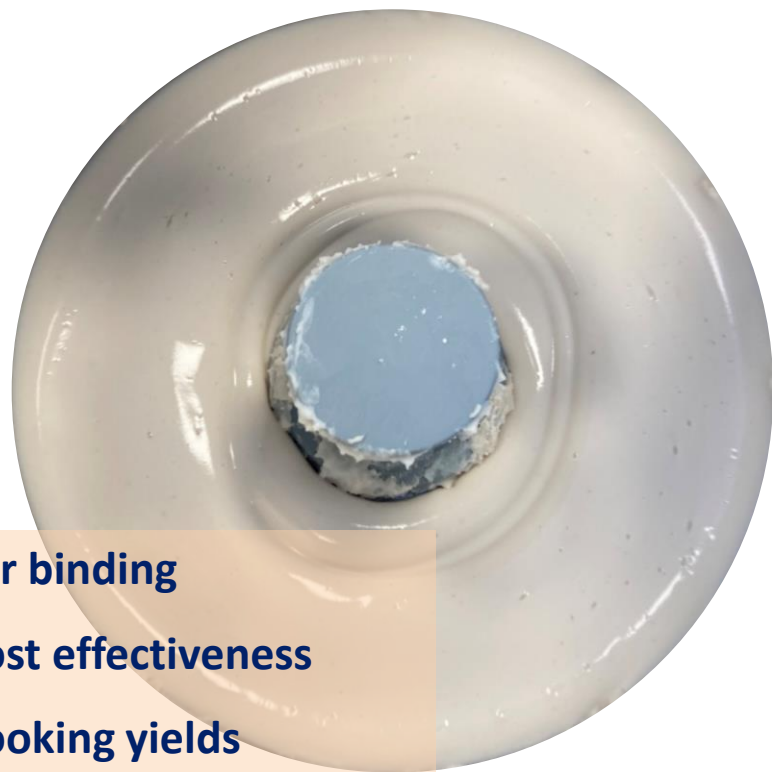
Protein Content vs Solubility



Water-binding, Viscosity and Gelation

Solubilizing Protein in Water

→ Glossy texture = Higher Viscosity and Water binding



Water binding

- Cost effectiveness
- Cooking yields
- Juiciness & mouthfeel
- Shelf-life



Heat
Treatment
Typically 70 - 95°C

Heating Proteins in **Excess** of Water

→ Gelling = Protein Swelling & Network formation



Gelation

- Heat irreversible
- Texture: Firm vs. Elastic
- Sliceability vs. Spreadability
- Optimal mouthfeel

Emulsification + Heat Treatment



Arcon® S 1:5:5



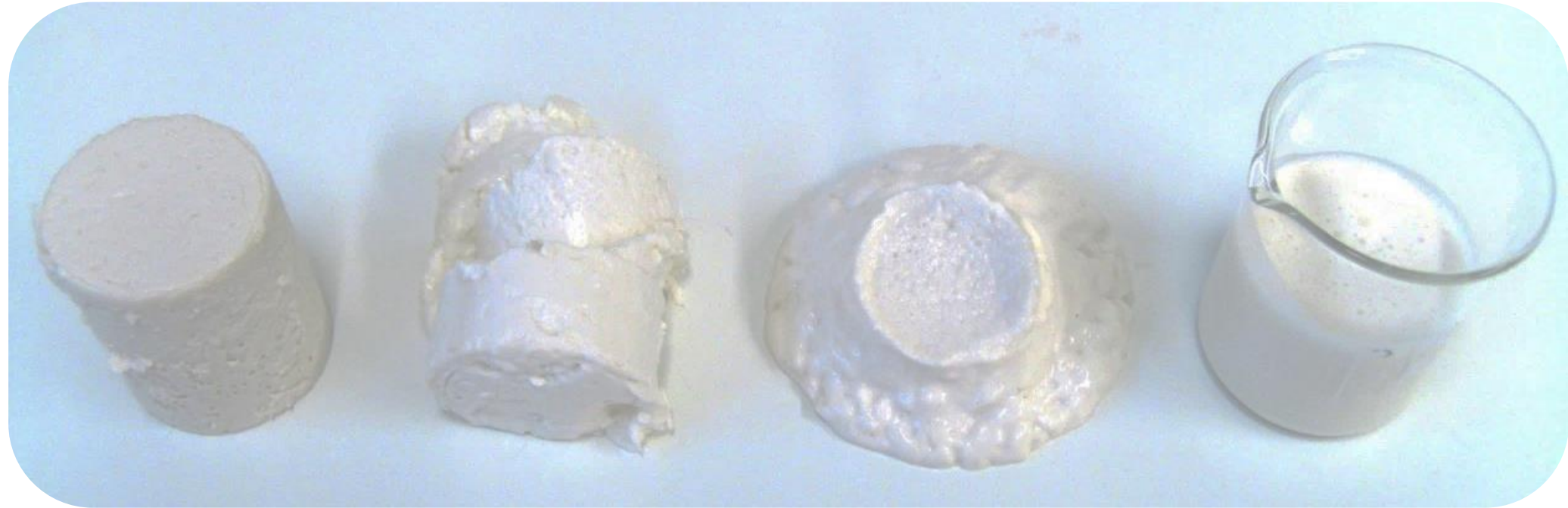
Navy bean flour 1:5:5

Emulsification

- Protein + liquids = SOLID
- Texture: Firm vs. Elastic
- Sliceability vs. Spreadability
- Optimal mouthfeel = Juiciness
- Stable emulsification = Good Shelf-life

1:5:5 = (1 protein : 5 water : 5 fat)

Stretching Emulsification



1:5:5

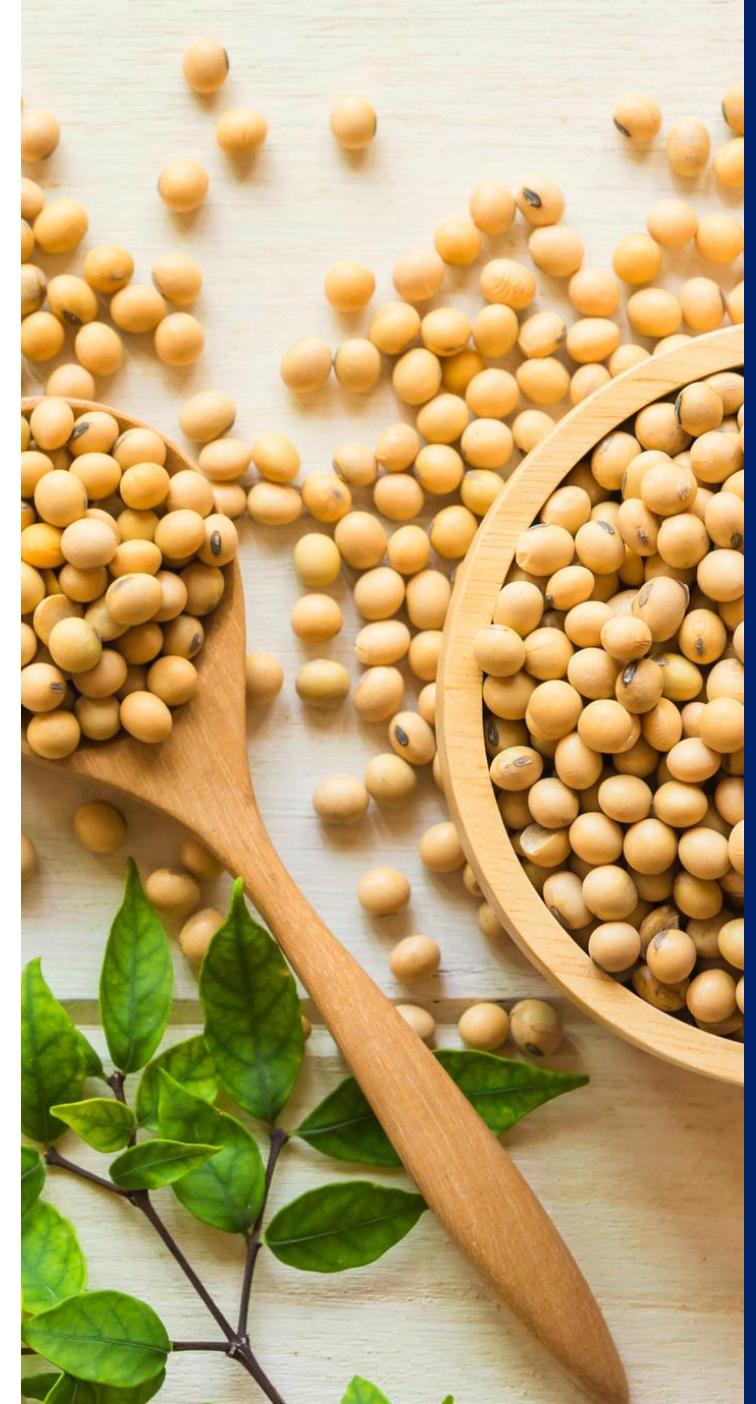
1:10:10

1:10:20

1:20:20

Arcon® S

(Protein: Water: Fat)



Global Protein Footprint

ADM's global protein nutrition solutions footprint supports your growth, *we are where you are*, accelerating tailored solutions to lead a dynamic market at scale.

United States

IA, Indianola

- Soy flour
- Soy protein concentrate
- Texturized soy protein

IL, Bushnell

- Texturized soy protein

IL, Decatur

- Soy grits
- Soy flour
- Soy protein concentrate
- Soy protein isolate
- Texturized soy protein

KS, Hutchinson

- Texturized soy protein

ND, Enderlin

- Pea hulls
- Pea starch
- Pea protein

Canada

QB, Candiac

- Wheat protein
- Vital wheat gluten

South America

Campo Grande, Brazil

- Soy flour
- Soy protein concentrate
- Soy protein isolate
- Texturized soy protein

Europe

Europe

France

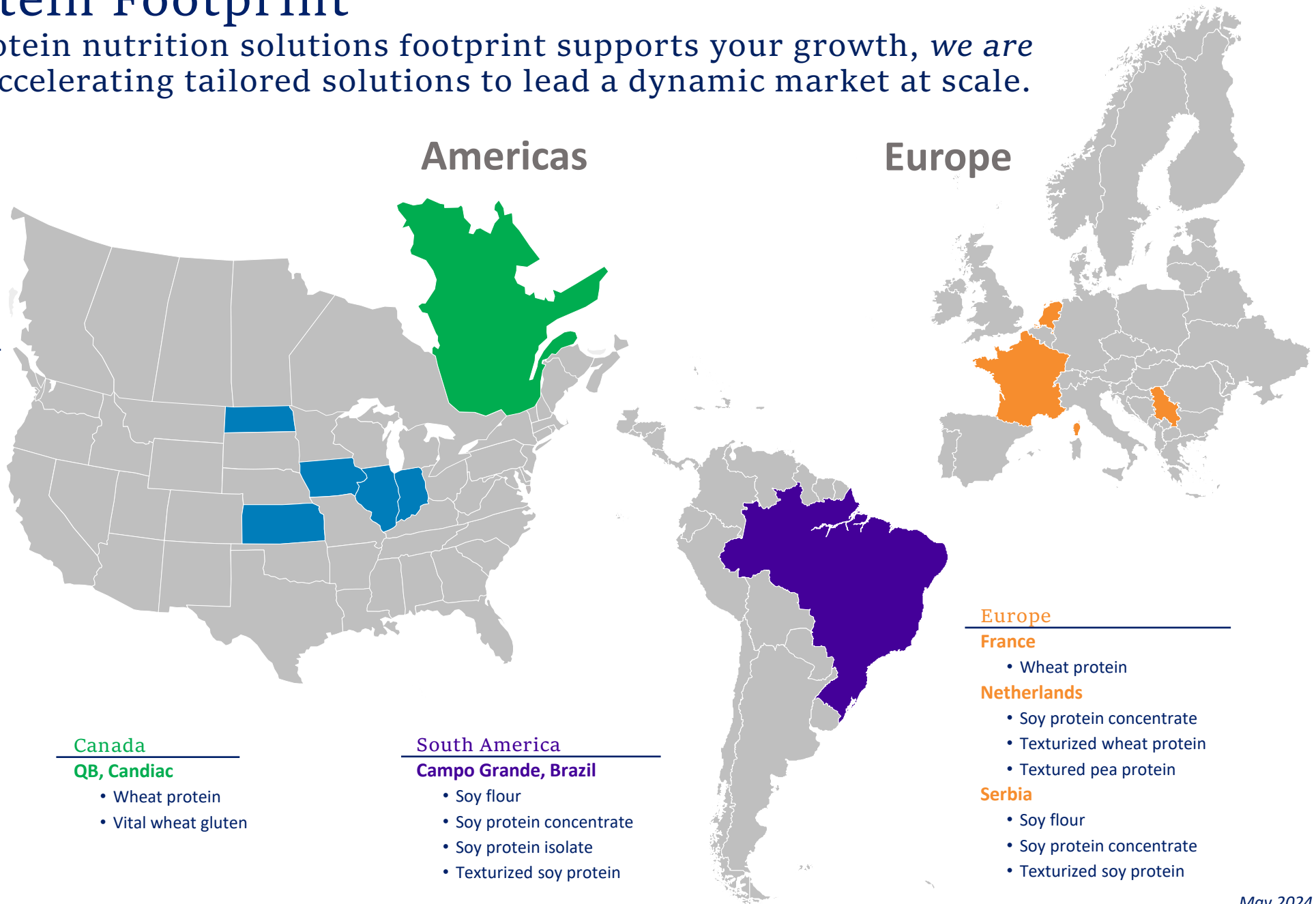
- Wheat protein

Netherlands

- Soy protein concentrate
- Texturized wheat protein
- Textured pea protein

Serbia

- Soy flour
- Soy protein concentrate
- Texturized soy protein



European-sourced for Shorter, More Consistent Supply

Sourcing in the Focus



ADM European-sourced Soy is grown and processed under strict **non-GMO** regulations at ADM's SojaProtein facility in Bečej, Serbia. As a European-sourced ingredient, it ensures a shorter, more reliable and consistent supply chain.

- **Regionally sourced**, making it ideal for **cost-effective formulations**
- Available with **ISCC** and **Europe Soya** third-party certifications
- Reinforces **commitment to environmental responsibility**





ADVANTAGE
Seminars

Come Visit
Us at the
Workshop



Game-Changing Taste and Texture



Plant-based Pulled Pork

Concept

Changing consumption patterns fuel the growth of street food dishes, handhelds, grab & go products and easy bites. Plant-based convenience still lacks excitement and variety. Manufacturers or large-scale kitchens often do not have the machinery to produce meat alternatives themselves. Available products often add costs and have a long ingredient list.

To **enable** all kind of food producers to create **their own meat alternative**, we developed a **simple recipe** that can be **integrated into all kitchen processes**. Our **TVP™ slices** can easily be turned into a **fibrous, pulled meat-like structure** that can be used as a filling, topping or meal component. The neutrality of our soy protein makes it possible to create clean label, craveable applications, that excite customers.

ADM's INGREDIENTS

- Soprotex® N-Slices
- Natural Pork type Flavor

BENEFITS

- Simple recipe with just two ingredients
- Cost-effective solution, TVP as affordable replacement for meat
- Neutral protein with clean taste & color

HIGHLIGHTS

Easy to
Produce &
Serve

Clean Label
& Short
Ingredient
List

Cost-
Effective

Plant-Based Protein Bar Taste The Indulgence!



Trisource Protein Bar Vegan*, Soy, Pea & Wheat Protein

Global Trend Alignment

Balanced Wellness, Proactive Personalization

Challenge

Vegan Protein is on the rise! When it comes to bars, the combination of high Protein content comes often with the price of dry mouthfeel or increased sugar or fat content.

Concept

Indulgent vegan bar with smooth caramel flavor

Crunchy bite and pleasant mouthfeel

Delivering on outstanding nutritional profiles with on trend claims:

High in Protein, Low in sugar, High in Fiber.

ADM Solutions

Plant-Based Protein

- **ProFam® 936 Soy Protein**
- **ProFam® 570 Pea Protein**
- **Nutriance® Wheat Protein Isolate**
- **AccelFlex™ Soy Crispies TS ST80**

Flavor Variants

- Caramel
- Salted Caramel
- Peanut
- Apricot
- Blueberry
- Nougat
- Orange
- Mixed Berry

Adlec RL, Rapeseed Lecithin

Prebiotic:

Fibersol®-2

Natural Flavoring

To label a product as "vegan" or "vegetarian", the national legislation of the country must be observed.

ADM products which are suitable for "vegan" and "vegetarian" comply with the respective ADM documents, which are aligned with the European Vegetarian Union (EVU) definitions on "vegan" and "vegetarian"

This communication is intended for B2B use and no statements are meant to be perceived as approved by regulatory authorities. Local regulations must be reviewed to confirm permissibility of ingredients and claims for each food category.

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HIGHLIGHTS

High in
Protein

Low in
Sugars

High in
Fiber



Thank You!



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Visit www.ADM.com