



PLANT-BASED PROTEINS INNOVATION AT ROQUETTE

**FROM ENVIRONMENTAL CONSIDERATIONS TO HEALTH AND
NUTRITION**



- 1. ROQUETTE , introduction**
2. Pioneer in new vegetable protein for long
3. Protein solutions at the heart of Roquette human and animal nutrition offer
4. Roquette new proteins strategy
5. Conclusion

ROQUETTE A GLOBAL LEADER OF PLANT-BASED INGREDIENTS

100+

Countries served by ONE
Global Commercial Network

5,000+

Customers

88

Years of industrial and
operational excellence

8,670

Employees

45+

Nationalities

25

Industrial sites

40

Patents/year

€3.7BN

Turnover

300+

R&D workforce



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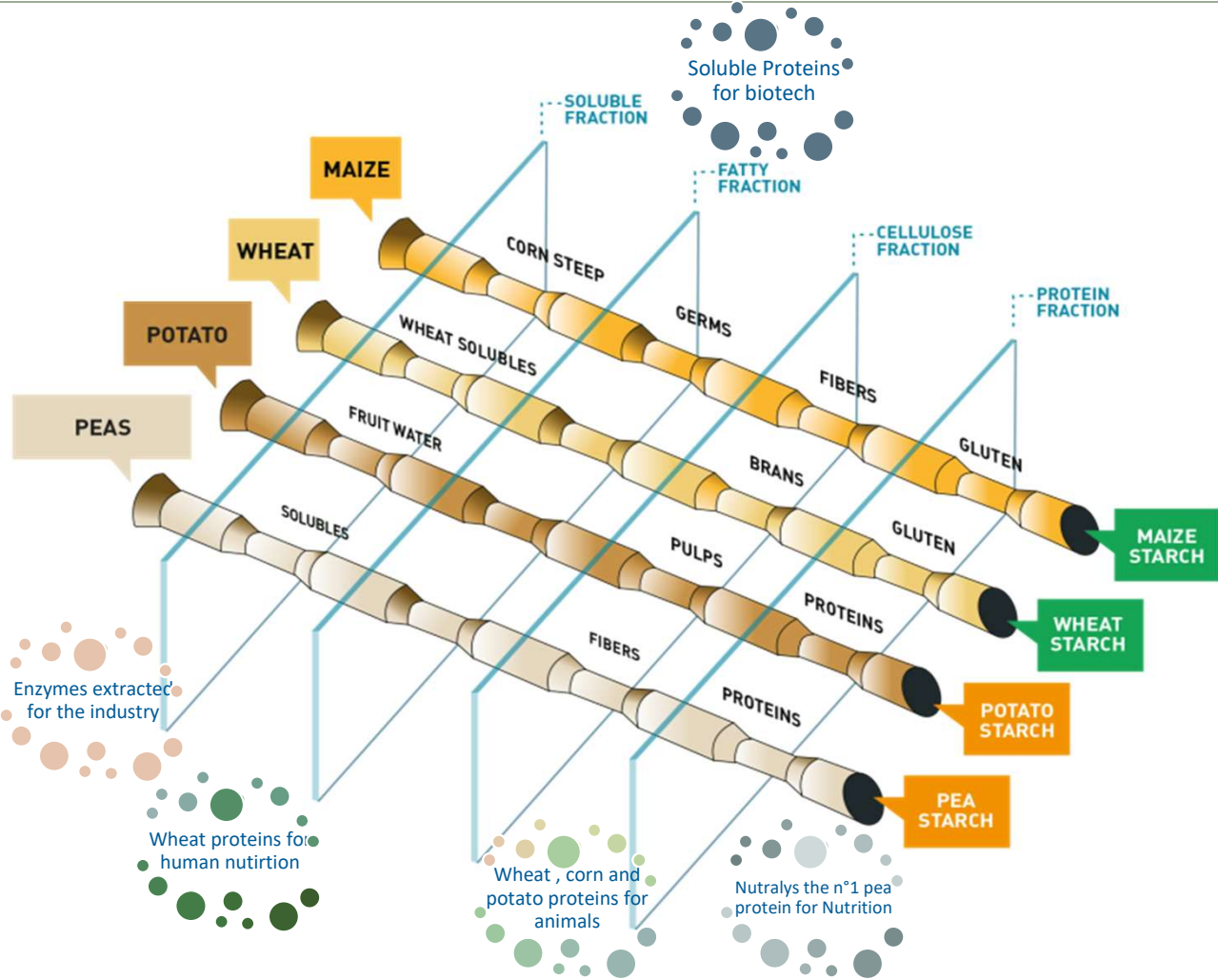
RAW MATERIALS PROCESSED AND PROTEINS

- **Potato** (1933) then **corn** (1946) : first for starch and starch derivatives
 - Rapidly investigations of **protein fractions** for reducing waste and improve sustainabilityCorn gluten then potato protein extraction, soluble corn protein . Several innovations developed for reaching the later in the 70's
- **Wheat** (1956) for food grade **gluten** then starch.
 - 2000's development of modified wheat protein and enzyme extraction
- **Pea** (2003) **first for protein** to meet human nutrition needs
 - Strong invest in R&D, application and capacity

R&D center founded in 1953,

R&D team dedicated to proteins

ROQUETTE , AN EARLY STAGE FOCUS ON PROTEIN COMPONENTS, SOME ACHIEVEMENTS :





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FOOD AND NUTRITION

- Protein solutions are key

Bakery and Snacks

- **Fiber and protein enrichment** with healthy sources of ingredients with best-in-class tolerance
- Plant-based solutions for **sugar intake monitoring**
- **Consumer-friendly texture** enhancers

Savory

- Renowned **starch specialties** to enhance **texture** in sauces, ready meals and soups
- Unique mix of **starch specialties** for new **crispiness sensations** in fried foods, batters and coatings
- **Sustainable protein ingredients** for a **tasty meat-free** offer and a **healthier planet**

Confectionery

- **Good for teeth performing powder solutions** for sugar-free chewing gums and tablets
- **Non-animal-based ingredients** for **gelatin-free soft treats**
- Sugar intake monitoring with **consumer-friendly solutions** for unique sugar-free soft treats

Dairy

- Reliable supply of **starch-based** texturizers for fresh dairy products
- **Sustainable plant-based proteins** for non-dairy alternatives

Beverage

- **Sugar-free fiber enrichment** to comfortably reach our daily targets
- A full range of **healthy and efficient energy** for **better-for-you drinks**

Specialized Nutrition

Offering the best of **plant-based nutrition** to meet **specific needs** at each step of life

02/03/2021



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5. Protein & ROQUETTE sustainability

WE PIONEER NEW PLANT PROTEINS

More than **40 years' experience** in researching and producing **plant protein**



One of the **pioneers** in plant **protein specialties** for **Food, Nutrition & Health markets**



The first Protein patent Roquette filled was potato-based in 1974

WE BENEFIT FROM A **STRONG PLANT PROTEIN POSITION**

Today: 15 years expertise in pea processing
> 600 kT of protein / year produced in 20 factories
4 botanical origins

AMBITION

To become the **long-term leader** in **new plant protein specialties** for **human nutrition**
by offering **high performance** and **sustainable solutions**

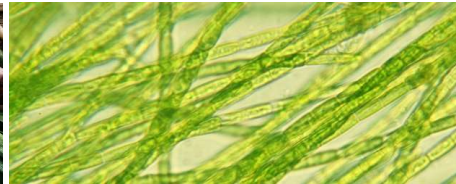


A PROGRAM DEDICATED TO NEW PROTEINS, SOURCES STUDIED BY ROQUETTE

TUBERS & VEGETABLES



MICRO-ORGANISMS



PULSES



CEREALS & ANCIENT GRAINS



OILSEEDS MEALS



FRUITS & NUTS



SOURCES ASSESSMENT

- Based on 60 criteria gathered into 5 categories

AGRICULTURE

Crop: rusticity and rotations
Fertilization esp. Nitrogen
Farmer margin

SUPPLY

Production & availability
Length and safety of supply chain
Cross contamination

COMPOSITION

Protein content
Side fractions and wastes
Other components of interest



PERCEPTION

Consumer intimacy
Naturality-GM
Mode of production-first processing

NUTRITION

Aminoacid profile
Antinutritional factors
Allergies/intolerance
Nutrients of interest

ASSESSMENT OF PROTEIN FAMILIES



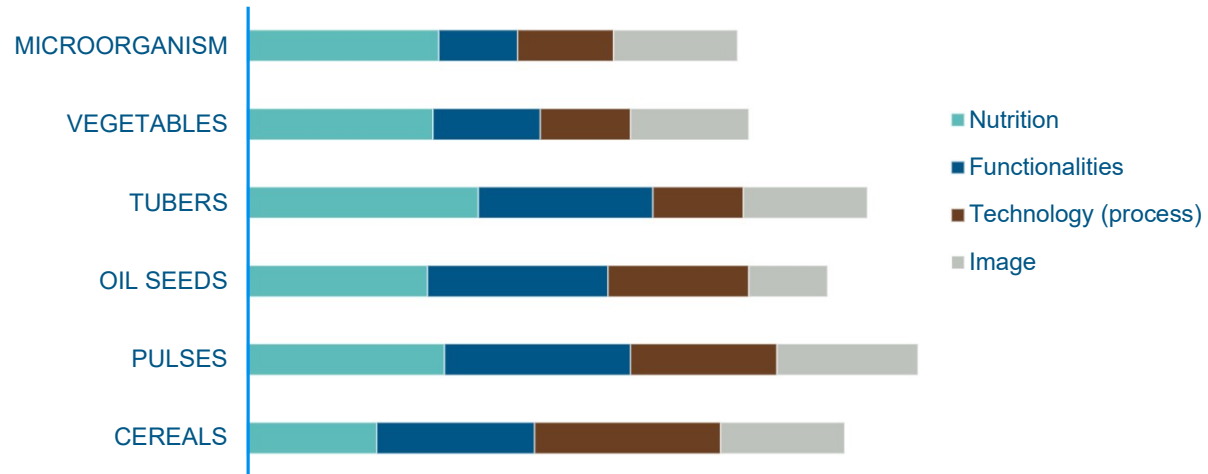
FAMILIES OF PROTEINS



26 PARAMETERS FOCUSED ON THE MAIN CHARACTERISTICS OF POTENTIAL PROTEINS



4 CATEGORIES



2020-2025 > ON THE WAY TO OFFER NEW PROTEIN SOLUTIONS

New Proteins Hub basis are the 3 pillars


New protein sources beyond Peas





2020 – 2025


Additional sources investigated

Protein Expertise: Internal Ressources on Protein




40 years expertise
In-house technologies

 2 Protein R&D platforms 


Techno-Halls 

Dedicated Protein organization
ProteinValley

Protein Network Collaborations




Consortiums

  PIC - EIT 
Pulse Protein Australia - Proteines France

R&D University and development
centers

Specific partnerships along value Chain

 **Roquette Ventures** 



2025

- The largest new protein range
- New Combinations of Proteins (blends, extrusion etc.)





NEW PROTEIN ACHIEVEMENTS

2020 INNOVATION & MORE TO COME IN 2021

2020 ACHIEVEMENTS

- **Fava Bean:** ROQUETTE launched a new texturized Fava protein in December 2019
NUTRALYS TFC, texturized for meat analogues applications
in synergy with Texturized pea proteins range



- **Fungi :** ROQUETTE , strategic partner of The Protein Brewery

“THE PROTEIN BREWERY raises € 22 million Series A investment Funding secures realization of Fermotein™ demo plant, supporting commercial scale-up .

The new investment round was led by Novo Holdings, joined by new investors **Roquette Ventures** and Unovis Asset Management . This diverse set of investors comprise global expertise in life-science and plant-based ingredients, a true focus on sustainable fermentation processes and a widespread, relevant network”.



CONCLUSION: THE VIRTUAL CIRCLE OF PLANT PROCESSING BY ROQUETTE

Respect of the environment is a priority till the origin for Roquette.

It explains the early-stage focus of the group on Protein innovation

Today the vegetable protein range of the group is reinforcing ROQUETTE health and nutrition solutions in the group offer.

Tomorrow, sustainability will be an even stronger driver for plant processing & innovation in new proteins



ROQUETTE
Offering the best of nature™