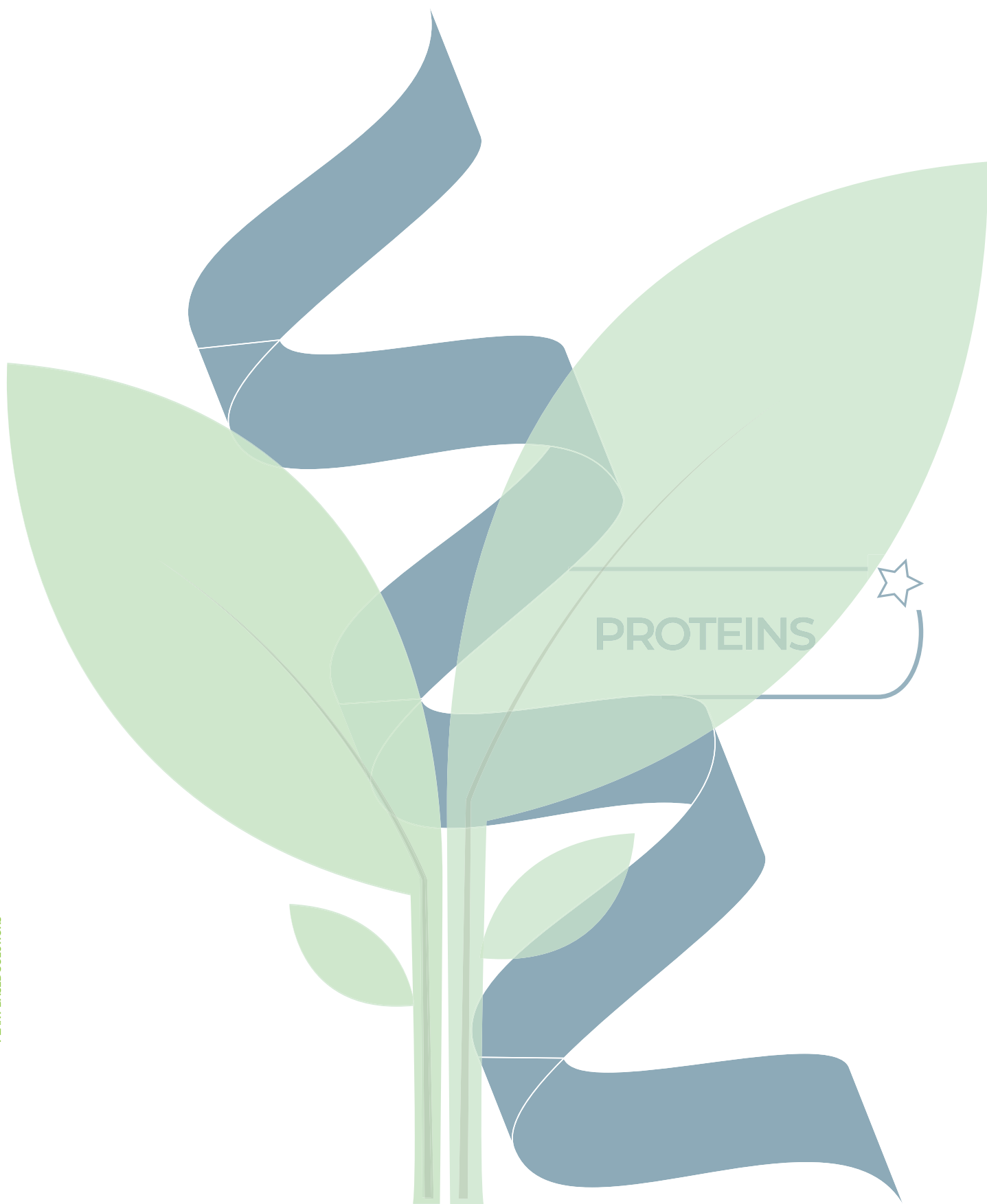


# PLANT-BASED PROTEINS MUST BE AN EU POLICY PRIORITY

THE EU STARCH SECTOR'S NEEDS FOR AN AMBITUOUS AND ACTIONABLE EU PROTEIN STRATEGY

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# INDEX

1.	The Contribution of Plant Proteins .....	3
1.1	Proteins as part of the European starch industry's value-chain	3
1.2	The European starch industry's diversity of plant-based protein product categories	3
1.3	Increasing EU consumer demand and need for sustainable food security	4
1.4	Innovation in today's specialised feed applications	5
1.5	Beyond competition - towards full complementarity	5
1.6	Diversity of tomorrow's new protein sources	5
2.	The Axes of our recommendations .....	6
2.1	Systemic thinking and value-chain approach	6
2.2	EU market potential and production	6
2.3	Research and Innovation programmes	7
2.4	Investing in industry capacity & deployment	7
2.5	Promotion and awareness-raising of plant-proteins benefits to consumers and investors	8
3.	Conclusions .....	9

# 1. THE CONTRIBUTION OF PLANT-PROTEINS

Starch Europe calls on the European Commission (Commission) to regard the forthcoming EU Protein Strategy as an opportunity for the EU to have a more coherent, ambitious and actionable strategy for furthering the development of the EU plant-based proteins sector.

This Strategy must help fully realise the potential of EU-grown plant proteins, if we hope to not only offer a better variety and diversity of proteins for consumers, but simultaneously increase the resilience of the food system, including through a rules-based international trade system to strengthen food security.

As recently stressed by the European Parliament, in its European Protein Strategy resolution ([2023/2015\(INI\)](#)), developing EU-grown plant-based proteins provides agronomic, environmental, climatic and nutritional benefits which actively contribute to the EU Green Deal goals, an objective also supported by the Council.

We therefore ask the Commission to make both the production (growing) and processing of cereals, starch potatoes and protein crops into plant-protein ingredients for food and feed sectors a priority across all EU policy areas, while ensuring that a full value chain approach is taken.

The European Parliament [resolution](#) rightly highlighted that, “(...) sustainable, diversified and domestic protein production must be recognised as a crucial aspect of the EU food and feed system in order to ensure sufficient availability of safe and quality food and feed and to maintain functioning and resilient food supply chains and trade flows;”

The following paper will outline what role EU starch producers can play in achieving that aim, and what is required from EU policy makers to help us get there.

## 1.1 Proteins as part of the European starch industry’s value chain & competitiveness

Every year, the EU starch industry processes around 25 million tonnes of almost exclusively EU-grown agricultural raw materials – mainly maize, wheat and starch potatoes and in smaller quantities peas, rice and barley – into more than six hundred products ranging from native starches, modified starches, liquid and solid sweeteners, to oils, proteins and fibres that are used as ingredients and functional supplements in food, feed and industrial applications.

Proteins produced by the EU starch industry are valuable components obtained from these raw materials, which significantly contribute to the competitiveness of the EU starch industry and EU policy goals in the transition to a green and circular economy.

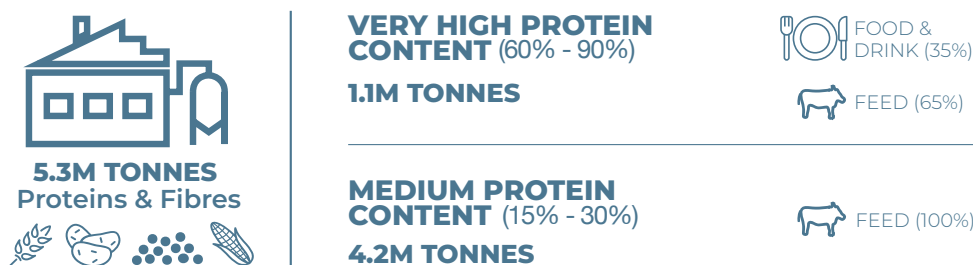
## 1.2 The European starch industry’s diversity of plant-based protein product categories

The wide range of the EU starch producers’ protein products contain various protein levels ranging from 15% up to 90%, to meet customer demand either in the food or feed sectors.

Of the 5.3 million tonnes of proteins and fibres produced by the European starch industry, 1.1

million tonnes are classified as very high protein content products - containing protein levels above 60% protein content. These include:

- Wheat proteins such as vital wheat gluten & its derivatives
- Maize proteins such as gluten meal
- Potato protein
- Pea protein
- Rice protein



The other 4.2 million tonnes are low-protein content products (such as maize gluten feed, wheat feed and dried distillers' grains with solubles (DDGS) that are used in animal feed, and as such contribute to the production of milk, meat, eggs, fish and shrimps.

### 1.3 Increasing EU consumer demand and a need for sustainable food security

Every year, the EU starch industry invests about 80 million € in research and development. Through targeted innovation, EU starch producers has developed a broad portfolio of valuable plant-based protein ingredients with high-protein content. These plant-based protein ingredients provide both functionality and nutritional qualities in a wide array of food applications.

The food applications require a high level of protein content, particularly in bakery products, specialised nutrition or in the fast-growing sectors of meat or dairy alternatives.

In the longstanding bakery outlet, vital wheat gluten is a well-known example: it has the capacity to form a continuous extensible and airtight elastic network in doughs, a property referred to as visco-elasticity. This improves dough strength, softness, and shelf-life of many bakery products.

Innovation also spreads across specialised nutrition, an area where the customers of the EU starch industry increasingly use the innovative functionalities and nutritional qualities of plant-based protein ingredients in, for example:

- sports nutrition
- slimming diets
- special diets for use in hospitals
- treating sarcopenia, particularly for the elderly population.

To meet the increasing demand of consumers who want to diversify their intake of proteins, our ingredients are used as valuable alternatives in flexitarian, vegetarian and vegan diets.

From replacement of animal proteins in products like burgers and other meat or dairy alternatives, to vegan products where the plant-based proteins are used as functional ingredients or as texturizers. Examples Include:

- ❖ Potato protein as emulsifier in:
  - dressings and sauces (e.g. non-allergenic vegan mayonnaise)
  - vegan, Halal and Kosher confectionary, as replacement of animal-based gelatine protein
- ❖ pea protein isolates in
  - wet extrudates, dry products (e.g. snacks or Texturized Vegetable Proteins)
  - instant drinks (e.g. fortified with these proteins, meeting consumers' demand for low-sodium healthier products)
- ❖ wheat protein providing texturizing properties and complementary nutritional value for total or partial replacement of animal proteins in human nutrition.

## 1.4 Innovation in today's specialised feed applications

The specialised feed markets also require products with a higher content of proteins. For instance, corn gluten meal – the maize protein – is used in poultry, where the presence of xanthophylls contributes to the yellow colour in egg yolks.

Vital wheat gluten – the wheat protein – is used in specialised feed applications such as starter formulations for young animals, or as replacement of fish meal in aquaculture. Pet food also is an important outlet for the EU starch industry's plant-based protein products.

## 1.5 Beyond competition - towards full complementarity

All outlets are important to the EU starch industry, as they significantly contribute to its overall competitiveness on the EU and global markets.

In its continuous research effort to valorise the whole plant, the EU starch industry has developed the markets for animal feed over the years, including traceable and certified feed chains. The lower-protein products are used to feed farmed insects, and to complement feed for poultry, pigs or cattle.

In the mature feed market, corn gluten feed and wheat feed contribute to increasing the EU availability of plant-based proteins, making the EU more self-sufficient and circular.

The starch industry will continue to serve the ruminants and pigs markets with mixtures of proteins and fibres to close the virtuous circle of its production processes. The more starch the EU industry produces, the more protein and bran-rich fibres it extracts, providing high-quality feed and helping to compensate for the EU's structural deficit in plant-based proteins.

This demonstrates the complementarity of the food and feed markets for plant proteins. No competition takes place as functionality varies according to protein content.

## 1.6 Diversity of tomorrow's new protein sources

In the medium-term, new protein sources will likely use feedstock from the EU starch industry to produce other alternative proteins. For instance:

- ❖ Starch-based products – such as glucose and carbohydrates - used as a carbon source to produce protein-rich micro-organisms or micro-algae
- ❖ Bran and spent water to produce insect proteins
- ❖ Corn Steep Liquor that can serve as nitrogen source to produce protein rich micro-organisms or micro-algae.

## 2 THE AXES OF OUR RECOMMENDATIONS

### 2.1 Systemic thinking and value-chain approach:

Growing and processing are equally important to serve EU plant protein customers and consumers.

Since the 2018 EU Plant Protein Plan that overlooked the processing steps and circular economy principles of starch biorefineries, the Commission issued the agri-food transition pathway which bases itself on the full eco-system of the value chain, including the first and second processing sectors.

Complementing the Commission's initiatives, the own-initiative report of the European Parliament, adopted on 18 October 2023, refers to a value chain approach, fully considering the key relevance and needs of the processing sector in supplying plant-protein products meeting EU consumer expectations.

Taking a value-chain approach will require:

- ❖ recognition of the farmers' role in growing the broad diversity of agricultural raw materials processed already today by the EU starch industry: both cereals and protein crops
- ❖ a spirit of collaboration with scientists and value chain actors initiated by the EIP-agri programmes
- ❖ the agility of starch biorefineries that produce a wide variety of ingredients serving all bioeconomy outlets, enabling the sector to be near zero-waste.

Starch Europe therefore calls on the EU Commission:

- ❖ to recognize cereals (e.g. maize, wheat, barley and rice), peas and starch potatoes as protein source and to support the essential role the processing sector plays in the value chain, serving food and feed customers.
- ❖ to support the development of a competitive EU supply chain for all existing plant-based proteins and new sources of proteins for use in food and feed.

### 2.2 EU market potential and production

Plant-based food and drink products have great market potential, for farmers and cooperatives, as well as for the processing industries. That is substantiated by:

- ❖ The development of pea and potato protein products that offer EU farmers new and promising opportunities, bringing high profit margins for farmers in the context of a decreasing Common Agricultural Policy budget.
- ❖ The Smart Protein project's "[Plant-based Food Sector Report](#)" compiling retail scanning data across the EU, points out that "The European plant-based-food sector experienced tremendous growth over the last two periods": 49% across all six plant-based proteins food categories between 2017 and 2020.

1. The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Starch Europe therefore calls for:

- ❖ the Member States to make use of the eco-schemes enabled in the framework of the Common Agricultural Policy to encourage the increase and diversification of crops.
- ❖ the Commission to introduce high-protein leguminous plants in crop-rotation. These high-protein leguminous plants that can be processed in starch factories will enable natural soil fertilization, contributing to greater Soil Health of arable land, as supported by the Commission's proposal of last July

## 2.3 Research and Innovation programmes

To remain ahead of the curve, Starch Europe calls on all stakeholders to support the innovation at each level of the plant-based value chain, through research and development funding in e.g.:

- ❖ improving seeds to
  - achieve better and more stable yields,
  - higher protein content and
  - greater disease resistance in protein crops
- ❖ optimising first transformation processes of agricultural raw materials to produce plant-protein ingredients for
  - food,
  - feed and
  - industrial applications
- improving the know-how on
  - the functionality, texture, quality and taste consistency of plant-based proteins in food applications
- ❖ complementing the recent Smart Protein project<sup>2</sup>'s "What consumers want: a survey on European consumer attitudes towards plant-based foods, with a focus on flexitarians' by launching scientific studies assessing the
  - nutritional quality and
  - impact of new protein sources used either alone or in combination with animal proteins.

## 2.4 Investing in industry capacity & deployment

The EU has strong agricultural and industrial capacities, which positions it as a front-runner in increasing the production of plant based proteins across-the-board.

To boost its protein potential, Starch Europe calls on public and private investments to aim at multiple objectives:

- ❖ to increase EU production of plant based protein ingredients while optimising the existing processes to produce with less energy, less emissions and less water; this will require significant capital and operational expenditure;
- ❖ to include plant-protein crops and ingredients in the research topics for calls for proposals in the area of Biodiversity and ecosystem services under e.g. Horizon Europe - Cluster 6: "Food, bioeconomy, natural resources, agriculture and environment";

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- ❖ to process new agricultural crops and to valorise even more the protein fraction contained in the cereals, the peas, rice and starch potatoes and
- ❖ to collaborate with various projects in the framework of the [Circular Bio-based Europe](#) and encourage that the 2024 and 2025 calls for proposals include in their list of topics:
  - the building on existing or creating new value chains producing innovative plant-based protein ingredients for the food and drinks applications as provided for in articles 46 and 47 of [Council Regulation establishing CBE JU](#)
  - deployment actions for industrial players under the [Innovation actions – flagship \(IA-flagship\)](#) heading
  - research in the agronomical and nutritional aspects of plant-based protein products under the [Research and innovation actions](#) (RIA) heading

## 2.5 Promotion and awareness-raising of plant-proteins benefits to consumers and investors

We also call on the Commission to promote, in a proactive manner, an increase in the consumption of plant proteins in the human diet to meet the inevitable increased demand of the growing global population for all categories of proteins (>40% increase by 2023 according to FAO).

Together with our customers, we strive to offer convenience and diversity in plant-based food and drink products, through processing of both cereals and plant protein crops into plant-based protein food and drink products.

Building on the “[Recipe for change: An agenda for a climate-smart and sustainable food system for a healthy Europe](#)”, Starch Europe therefore calls on the Commission:

- ❖ To implement the recommendations of the Commission’s [Food2030](#) Independent expert group : increasing the intake of plant-based proteins in the human diet through EU and national informational campaigns, whose main objective is to raise awareness on the benefits of producing and consuming plant protein products in food and drinks
- ❖ To unblock and resolve the current regulatory vacuum of promotional measures under [Regulation 1144/2014](#):
  - today, plant-based food and drink products cannot benefit from these promotional measures because they are not recognized as eligible products in article 5 or its Annex I.
  - Extending the list of eligible products with the objective to adapt to new customer demand to balance out both food and feed outlets of plant-based proteins is one of the main goals of this revision of Regulation 1144/2014.
- ❖ To promote both nutritional and agronomical benefits of ready-made convenient plant-based food and drink products
- ❖ To take the opportunity of the technical screening criteria of the EU Taxonomy of sustainable investments to profile the agronomical benefits of growing plant-protein crops and processing them in the EU, to the restoration of biodiversity.



### 3 CONCLUSIONS

Establishing or optimising full value chains requires to positively promote plant-based proteins across the various EU policy areas:

1. A **holistic approach** which recognizes the **important role the plant-protein strategy** can play in the **overall context of the EU bioeconomy approach** and the interlinkages between all the policy areas impacting the bioeconomy (as already recognized in the EU Commission's President SOTEU's with her upcoming initiative on "the full benefits of biotechnologies and biomanufacturing, key to the competitiveness and modernisation of EU industry due to their high growth potential and labour productivity").
2. The **next CAP discussions** that will start in 2024 with the Commission's proposal due to be published by end 2025, **taking into account the soil health and the Farm-to-Fork approach**,
3. The **EU and national research & innovation funding**, programmes and investments in partnerships
4. **Promotion of plant-based food and drinks** including the long-awaited publication of Commission's proposal, revising Regulation 1144/2014 about the promotion and awareness-raising in the EU
5. **Sustainable finance** and the technical screening criteria of the **taxonomies** that build the EU classification system for economic activities that are considered as environmentally sustainable for investment purposes.
6. A **prudent approach in trade with third countries**: EU investments to build its plant-based protein and overall ingredient supply chain must not be undermined by importing plant-based ingredients with lower sustainability standards from third countries.

Starch Europe will continue to engage with stakeholders and contribute to EU initiatives.

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