Wageningen Social & Economic Research | Leaflet

Primary food processors in the EU - an essential and efficient engine of the food chain

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Contents

1 The primary food industry actors play a crucial role in the EU food chain and bioeconomy, but this is not always recognised by policy makers and the public

In 2015, Wageningen Social & Economic Research (then LEI Wageningen UR) produced a study for Primary Food Processors (PFP), which focused on the primary food processing industries in the EU to showcase their importance to the EU food system (Logatcheva and van Galen, 2015). This study, which presented key figures, and highlighted a number of threats and opportunities, has been used in continuous dialogue with policy makers to help underline the importance of protecting and preserving the industries' competitiveness and to highlight the efforts put into increasing their sustainability. The primary food processing industry connects millions of farmers with food processing industries, supplying quality ingredients for food, feed, and industrial uses. However despite its crucial role, primary food processing often goes unnoticed by policymakers and the public. Highlighting its importance and addressing its specific needs is vital to enhancing its competitiveness in the European food chain.

10 years later, at the start of a new European Commission term and after a period of global uncertainty including both the COVID pandemic and the still-ongoing conflict in Ukraine, PFP has commissioned an update of the insights from the 2015 study, to better reflect the new realities. In preparing this update, Wageningen Social & Economic Research assessed the latest industry data to present the current state within the six sectors of the primary food processing industry: vegetable oils, vegetable proteins, flour milling, starch products, sugar, and cocoa.

1.1 Research questions

The research questions for this quick scan were the following:

1. What is the role of the primary food processing industry for the European agrifood chain, in terms of production value of the European primary food processing industry, and the number of direct and indirect jobs created by the primary food processing industry?
2. What are the opportunities and challenges for the European primary food industry to be fit for the future and to support the EU's competitiveness?

1.2 Research method: A combination of private & public data complemented with a survey

Some of the industry statistics were delivered by the associations, while most of the presented data in Chapter 1 originate from public sources, as cited in this publication.

For Chapter 2, the industry SWOT analysis, the respective member associations of the PFP industry association – European Cocoa Association (ECA), European Flour Millers (EFM), European Vegetable Protein Association (EUVEPRO), European Association of Sugar Manufacturers (CEFS), FEDIOL (EU vegetable oil and proteinmeal industry association), Starch Europe (EU starch producers association) – were surveyed on the main Strengths, Weaknesses, Opportunities and Threats, for each of the industry sectors, in the short term, mid-term (2-5 years) and long term (>5 years). Each industry association provided a single response, resulting in a total of 6 answers analysed. The consolidated main outcomes of the surveys were validated in an online meeting with the presidents or similar representatives of the associations in March 2025. Only EUVEPRO was not represented in the meeting and they shared their input in writing. The outcomes have been supported by additional sources where possible, with references provided in such cases.

2 Turning raw agricultural inputs into valuable food and feed ingredients

- *Important for EU agriculture*
  The industry processes large amounts – almost 250m tonnes in 2024 - of raw agricultural products and has very strong ties with the agricultural sector. Primary food processors play an important role for farmers, as a major outlet for their crops. For example, there are 98,000 sugar beet growers in the EU, who supply their products to 85 beet sugar factories.
- *Consolidating industry, higher efficiency*
  3,000 companies produce about 90% of the total output of the industry. Most of these companies operate (~2,800) in the flour milling industry. In contract, in the other sectors consolidation is quite high, with only a handful of companies producing a major share of the total output. The consolidation has led to a very efficient industry in terms of logistics and processing scale.
- *Stable production despite price volatility*
  Primary food processing accounts for 7% of the total production value of the food manufacturing sector in the EU. The production value of primary food processors was stable since 2015, but increased sharply after 2021. The industry has maintained a relatively steady production volume over the past decade but has begun to decline in recent years due to high prices of raw commodities. However, the oil, sugar and plant-based protein sectors have seen prices decrease again after initial rises following the Russian-Ukraine war.
- *Contributing to almost 1.2m indirect jobs*
  There are close to 140,000 people working in the primary food processing industry, while the number of indirect farm-level jobs created by the industry is almost 1.2m.

2.1 The six industry sectors of the primary food processing industry in scope of this study

The primary food processing industry in Europe transforms raw agricultural products into ingredients which are ready for secondary processing into food, animal feed or energy and industrial applications. The primary food processing of plant-based products, involving the members of PFP, consists of six different industries, including vegetables oils, vegetables proteins, flour milling, starch products, sugar, and cocoa (Figure 1). Primary processors of animal products are out of scope of this study.

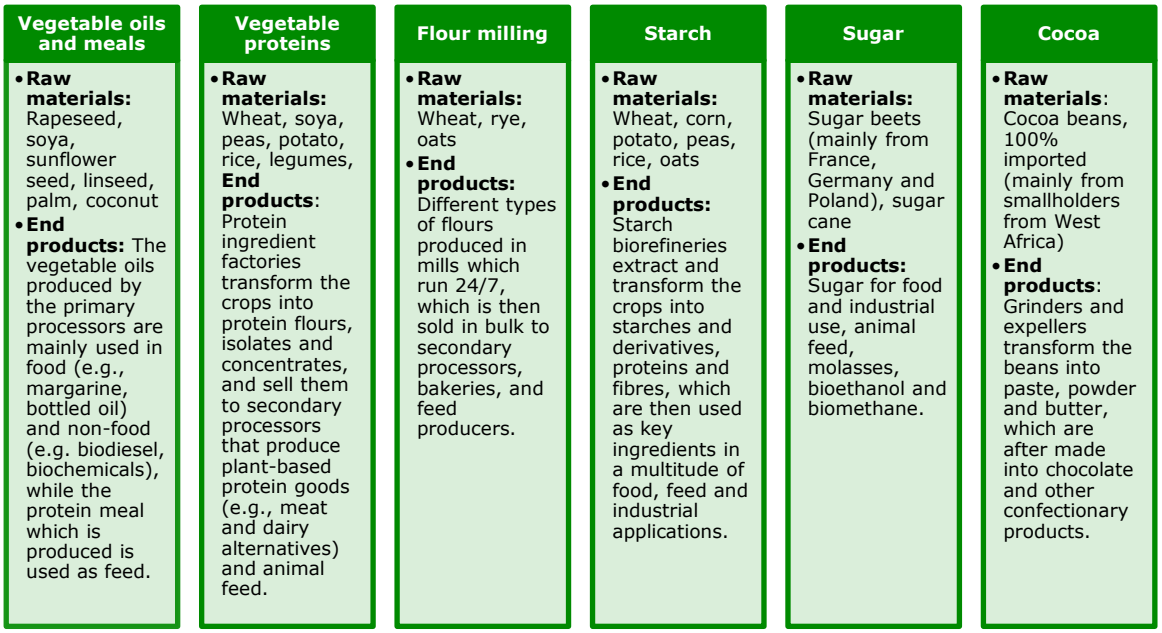


Figure 1 *Brief overview of the inputs and outputs of six industries of the primary processing industry*

The primary food processing companies play a major role in the efficient, timely, and safe processing of these raw materials, being a major intermediary industry between farmers on the one hand and food processors on the other hand. Despite being this important linking pin between farmers and other actors in the food production chain, these companies are often invisible to the end consumer. In the case of starch and sugar – and to a lesser extend vegetable oil and flour milling -, processing facilities are often located in rural areas, providing employment to rural communities, whereas other parts of the primary food processing industry (i.e. the cocoa sector) are linked to imports from low- and middle-income countries, with processing facilities often located near major port areas.

Depending on the specific activity, between 45% and 90% of the ingredients processed by the industry end up in food, making it an essential contributor to food security in the EU. The remaining part of the output from the industry provides essential inputs to animal feed, the energy sector, and pharmaceutical and cosmetic industry, as well as a multitude of industrial uses.

2.2 A highly consolidated industry, with two sectors still changing

Most primary food processing industries are highly consolidated, like the sugar, cocoa and starch sectors, where a relatively small number of companies make up a major share of the market. In 2024, about 3,100 companies were active in the primary food processing industry, according to the latest data from the PFP member associations, as can be seen in Table 1 Compared to the roughly ~4,000 companies in the previous study conducted in 2015 (Logatcheva and van Galen, 2015), the number of companies has decreased over the past decade. This points to further consolidation of the industry, as production value did not decrease at the same rate.

Flour milling is currently in the process of consolidation. Their industries still include many SMEs, but an increasing number of them are ceasing operations, while the largest players continue to expand their market share (e.g., in flour milling, the biggest 12 companies own 39% of the total milling capacity (Martielli, 2024)). Only in the vegetable protein sector is the number of companies rising, driven by the rise of novel plant-based protein products and the emergence of start-ups.

Table 1 presents estimates for the number of companies operating in the EU in 2024 in each industry, based on statistics from the member associations. Companies that are part of the PFP association represent a large portion of the total market. For example, Starch Europe members account for more than 95% of EU starch production (StarchEurope, 2025) and ECA members for 90% of Europe's cocoa bean grinding. Mainly very small companies are not part of it. This causes the numbers of companies reported in Table 1 to be underestimated compared to the actual figures. According

to Eurostat data, the number of enterprises in the relevant food processing industries in the EU (excluding starch) are higher – 21,300 in 2022 – but this number includes some secondary processors as well, and is therefore not representative.

Table 1 *Estimated number of primary food processing companies by industry activity in the EU, in 2015 and 2024*

	Industry status	Number of companies in 2015	Number of companies in 2024	Source
Vegetable oils	consolidated	35 a)	~70	(FEDIOL, 2024a)
Vegetable proteins	growing	n.a.	125 b)	(EUVEPRO, 2025)
Flour mill products	consolidating	3,800	~2,800	(EFM, 2025)
Starches	consolidated	24	30	(StarchEurope, 2025)
Sugar	consolidated	61 c)	34	(CEFS, 2025a)
Cocoa	consolidated	20	29	(ECA, 2025)
Total		~4,000	~3,088	Verified with member associations

a) only larger companies included; b) number of factories. There is a large number of start-ups in this industry, which are not included in this number; c) including non-sugar producing subsidiaries of sugar manufacturers. Excluding those, the number of companies is 48. (Adjustment added in 2025, CEFS.)

Source: 2015 data from Logatcheva and van Galen (2015). 2024 data are own estimation based on sources as indicated in last column.

2.3 Processing almost 250m tonnes of raw agricultural commodities

As a major channel for the processing of plant-based agricultural commodities, the total volume processed annually reached nearly 250m tonnes in 2024. The industry processed over 550 kg of raw agricultural inputs per EU inhabitant in 2024, including 100 kg of wheat per capita. The industries with the largest throughputs were sugar beet processors, with 110.7m tonnes of processed beets in 2024, and vegetable oil processors, with 50.6m tonnes of oilseeds crushed (see Table 2).

Table 2 *Volume of processed raw materials, and its share in primary food processing total, by industry (2024)*

	Raw commodities processed, in million tonnes, in 2024 a)	Of which sourced from EU, in million tonnes b)	Share in primary food processing total, in %
Vegetable oils	50.6	32.1	20.4
Vegetable proteins	16.4	16.4	6.6
Flour mill products	47	42.3	18.9
Starches	22	22	8.9
Sugar	110.7	110.7	44.6
Cocoa	1.6	0	0.6
Primary food processing total	248.3	223.5	100

a) Source: industry statistics of FEDIOL (2023), GIRACT (2024), EFM (2024), Starch Europe (2024), CEFS (2024), ECA/ICCO (2025); b) own calculation, based on primary food processing industry estimates.

The Eurostat statistics on products (Eurostat PRODCOM, 2025) reveal information about the output of the industry after processing. The production of the industry in the EU was 130m tonnes in 2023 (Figure 2). In addition to these products, other co-products are produced that are not separately shown in Figure 2. In general it can be said that the production volume of the industry in total was largely stable over the past 10 years. Production volumes of vegetable oils and proteins have shown an upward trend, while flour mill products and sugar production have been slowly declining. Cocoa and starch production volumes have remained mostly stable in this period, but have declined slightly in the last two years. Prices of these commodities are high at the moment, potentially affecting demand.

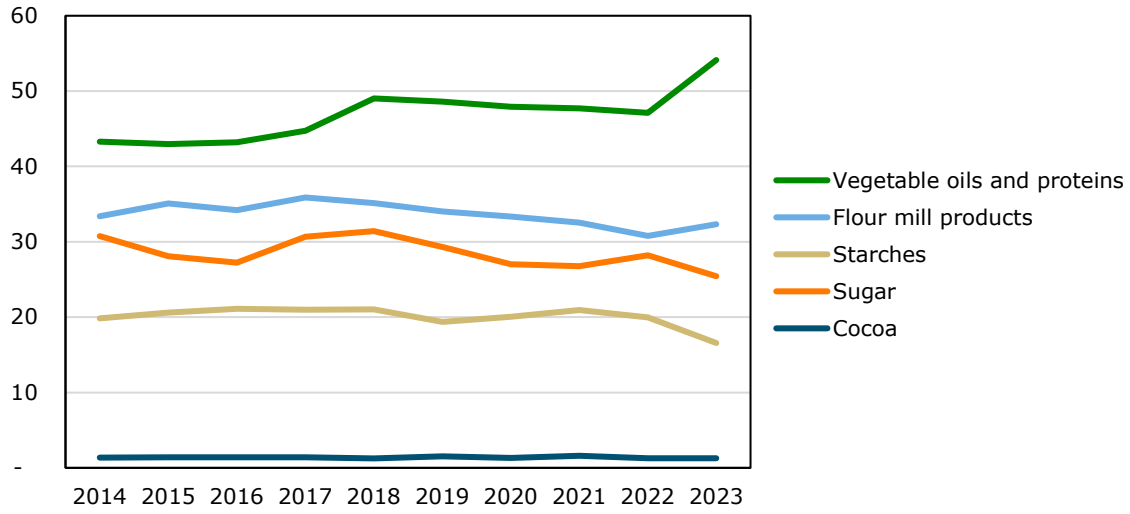


Figure 2 *Production volume of the primary food processing industries, excluding byproducts, in million tonnes, 2014-2023 Source: Eurostat PRODCOM, 2025.*

2.4 Stable production value until 2021, surging afterwards due to high prices

The total production value of the primary food processing industry was €78bn in 2023, which is the highest it has been over the past 10 years. It represented 7% of the total value created by the food processing industry (Figure 3), similar to the share estimated in 2015 (Logatcheva and van Galen, 2015).

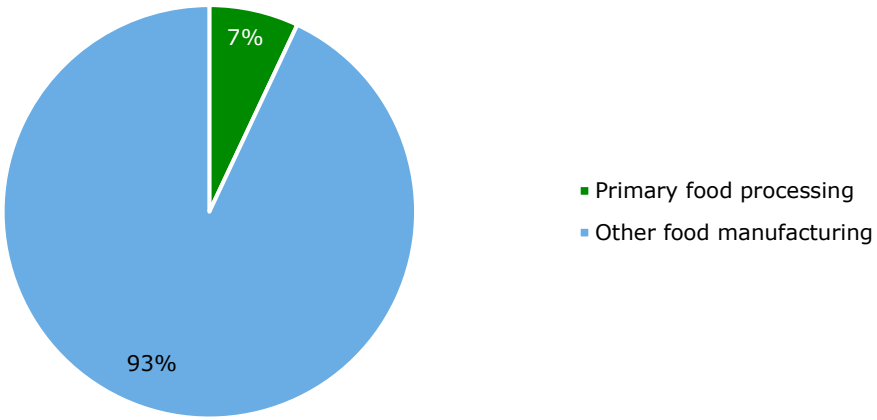


Figure 3 *Production value of primary food processing industry as a percentage of the total production value of food manufacturing in the EU, in 2023*
Source: Eurostat PRODCOM, 2025; Eurostat SBS, 2025a.

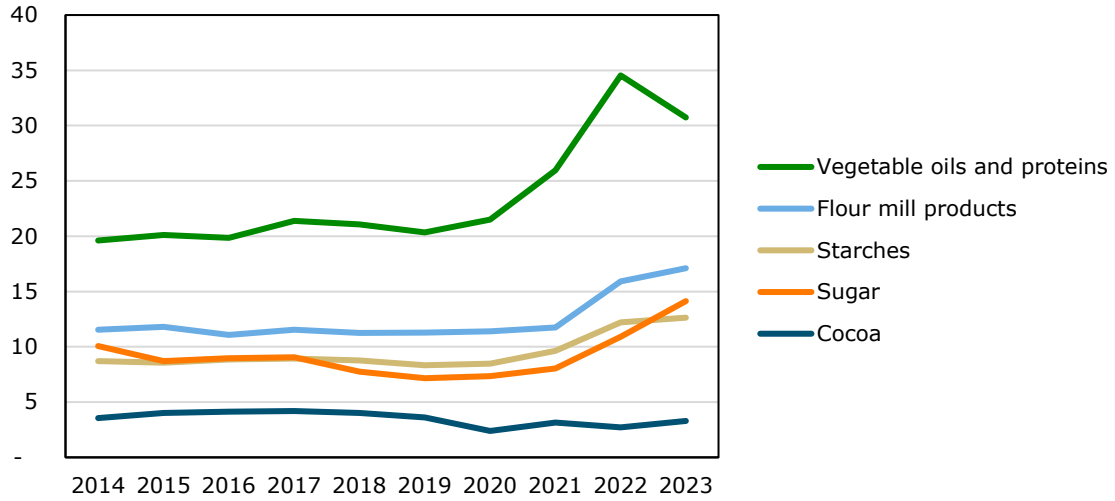


Figure 4 *Production value of the primary food processing industries in the EU in billion euros, 2014-2023*
Source: Eurostat PRODCOM, 2025.

Vegetable oils and proteins accounted for the largest share of the industry production value with €31bn in 2023. Flour mill products, sugar and starches had a similar production value with €17, €14 and €12bn respectively. Cocoa was the smallest contributor, with a still significant production value of €3.3bn in 2023 (Figure 4). Over the past 10 years, the production value of the primary food processing industry remained fairly stable until 2021, when it began to increase. In 2021, the production value increased by 15%, and in 2022, it surged by 30%. During this period energy and agricultural commodity prices rose sharply. In 2023 the total production value remained almost the same as in the previous year.

Vegetable oil and protein processing have shown a particularly strong upward trend in production value since 2019, while flour mill products, starches and sugar have also seen steady increases in production value since 2020. Cocoa production has remained relatively stable since 2014.

2.5 The industry contributes to 1.2m jobs in the EU

Direct jobs

Based on industry statistics, the number of persons directly employed in the EU primary food processing industry was 137,500 in 2022, excluding the direct jobs generated by the cocoa processing industry, as they could not be assessed. Based on Eurostat data it is not possible to estimate the number of direct jobs produced by the primary food processing industry accurately, as the database lacks the exact categorisation to do so. Total employment in the food and beverage manufacturing industry was 4.7m in 2022 and 2023 based on Eurostat.

In Eurostat, employment data for vegetable oils and proteins cannot be separated either. Of the two available numbers, one is certainly an underestimate, as it only shows employment related to margarine production, while the other is an overestimate, as it includes the processing of animal products. As for employment in the cocoa processing industry, the available data shows employment of the primary and secondary processing industry combined. Therefore, the range provided based on Eurostat data is wide, and the actual employment figure cannot match either extreme of this range.

Table 3 *Number of employees employed directly in the primary food processing industry, 2022*

Industries	Industry reports	Eurostat (EU27)
Vegetable oils	20,000	Between 6,285 (only margarine) and 60,466 (including animal products)
Vegetable proteins	32,500	(Included in vegetable oils)
Flour mill products	45,000	81,232
Starch	16,000	17,673
Sugar	24,000	26,499
Cocoa	n.a.	<170,000 (including secondary processors)
Primary food processors total	137,500	131,689 – 355,870 a)

a) Lower range end: taking only margarine numbers for vegetable oils and not including cocoa employees. Higher range end: including also animal based products from Manufacturing of oils and fats and including all employees from Manufacture of cocoa, chocolate and sugar confectionery.

Source: industry data of CEFS, ECA, EFM, EUVEPRO, FEDIOL, Starch Europe, Eurostat SBS, 2025b.

Indirect jobs

In addition to the employment opportunities created directly by the industry, there are also indirect jobs throughout the food production chain which are created by - and often strongly depend on - the industry. To create an estimate of the indirect employment opportunities that are created by the primary food processing industry, numbers from their main suppliers, the raw agricultural material producers in the EU, were used. Other indirect employment, such as at specific equipment manufacturers, fertiliser suppliers and service providers, were not included in the estimate, making the estimate modest compared to the actual number.

Primary food processors are among the main buyers of several crops produced in the EU, thereby having a significant impact on the livelihoods of EU farmers. As an example, there are 98,000 sugar beet growers in Europe, who supply their products to 85 sugar factories (CEFS, 2025a). The demand from the PFP industry at the farm level creates 1.2m indirect jobs (see Table 4), which equals more than half a million indirect annual work units (AWU).[1] The indirect jobs represented by this number relate to jobs in arable farming throughout the EU, most notably in the farming of rapeseed, sunflower seeds and soya beans, cereals, pulses, potatoes and sugar beet.
The largest contribution to indirect employment at farm level can be contributed to the vegetable oil processors and the flour millers. Potatoes and sugar beets require less labour per kg yield, which means that they create fewer indirect jobs at farm level, but can therefore also be seen as productive industries.

[1] Annual work unit (AWU) is an indicator of full-time equivalent employment used in agricultural statistics on Eurostat. It is defined as 'the total hours worked divided by the average annual hours worked in full-time jobs in the country. One annual work unit corresponds to the work performed by one person who is occupied on an agricultural holding on a full-time basis.' https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Annual_work_unit_(AWU)

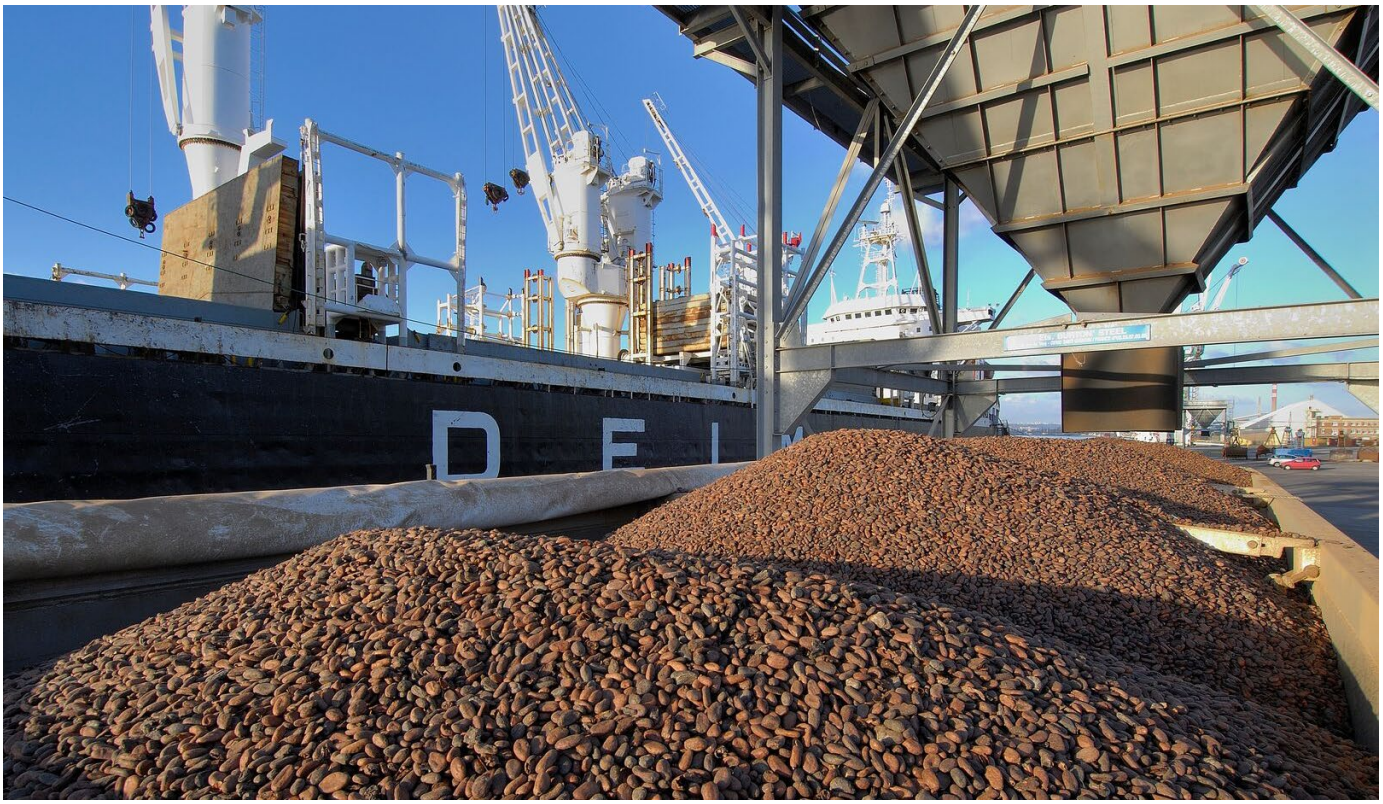
Table 4 *Estimate of the indirect employment in EU agriculture from the primary food processing industry a), 2023*

	Indirect AWU	Indirect Persons employed
Manufacture of oils and fats	239,535	503,548
Manufacture of vegetable proteins	58,915	123,851
Manufacture of wheat flour mill products	156,620	329,246
Manufacture of starches and starch products	52,633	110,646
Manufacture of sugar	52,098	101,548
Total	**559,802**	**1,168,840**

a) Cocoa is not produced in significant quantities within the European Union, with the exception of French Outermost Regions and Overseas Countries and Territories.

Source: own calculation based on industry data for volumes of processed raw materials, FAO data for yields and Eurostat data for area, employment.

FAOSTAT, 2025; Eurostat FSS, 2025a; Eurostat FSS, 2025b.



3 To remain competitive and improve sustainability in an uncertain business environment, the industry needs stability, clarity and support

The industry consists of sectors which each have their unique characteristics and industry dynamics. Together they form a crucial pillar in the EU food system, by contributing to food availability and security, the bioeconomy and rural competitiveness. However, the inevitable sustainability transition is challenging due to industry specifics, and the industry will require additional attention and support to comply and reform in order to remain competitive.

This chapter introduces the main strengths and weaknesses of the industry, while also looking at which opportunities and challenges are most probable to arise and will be the most pressing. The analysis is based on various reports (EC, 2025; Eurostat, 2025; FAO, 2024; Logatcheva and van Galen, 2015; WBCSD, 2024), on input from the industry associations, collected through a questionnaire, backed by reports from industry associations:

- European Cocoa Association (ECA): ECA, 2025; Myers, 2025
- European Flour Millers (EFM): EFM, 2024, 2025; Martielli, 2024
- European Vegetable Protein Association (EUVEPRO): EUVEPRO, 2025; GIRACT, 2024; Roquette, 2025
- European Association of Sugar Manufacturers (CEFS): CEFS, 2019, 2024, 2025b
- European vegetable oil and protein meal industry association (FEDIOL): FEDIOL, 2023, 2024a, 2024b, 2024c, 2024d
- Starch Europe: Roquette, 2025; Starch Europe, 2025.

3.1 Strengths – Large scale, strong EU market and reliable supply chain

- **High efficiency and scale**: The industry benefits from high efficiency due to large-scale processing of agricultural bulk products, except for plant-based proteins, where scaling remains a challenge, though the start-up ecosystem is booming). Continued innovation and investments have further improved operational efficiency, particularly in the cocoa, sugar, starch and flour milling industries, while in the plant-based protein industry further innovation is to be expected. For comparison, based on Eurostat, the investment rate in tangible non-current assets in 2022 in the EU was 14% in the manufacturing industry, 18% in the food manufacturing industry, and 17-23% in the primary food processing related industries.[2] Industry consolidation, such as the decreasing number of flour mills and starch processing facilities with increasing market share for the largest producers, has contributed to enhanced efficiency. The sugar and cocoa industries have been consolidated for a long time.
- **Strong EU market demand**: Primary food processors play a crucial role in the food supply chain, supplying essential ingredients for a large share of all EU food products. For example, 70% of the milled flour is used in baked goods, 45% of the processed oils become food, and over 90% of all vegetable oils consumed in Europe are refined by EU processors. Flour, vegetable oils, starch and cocoa products remain in high demand, while demand for plant-based protein food is also growing in Europe. Besides, primary food processors contribute to the industrial sovereignty of the EU by providing solutions for the bioeconomy, pharma and paper industry.
- **Reliable EU sourcing and supply chains**: Most raw materials are sourced locally within the EU, providing stable supply chains, strong ties and long-term contracts with farmers, reduced transportation emissions, and high traceability. However, stable supply chains have been changing recently due to the Ukraine war, leading to a mix of positive and negative outcomes for the industries, which the primary food processor industry is managing effectively. The cocoa and soya-using sectors are exceptions, as they rely on imports.
- **Adaptability and technical expertise**: The industry has a strong ability to adapt to market changes and disruptions. For instance, oilseed processors have developed flexible plants capable of processing different agricultural commodities, flour millers and cocoa processors adjust to changing user demands, and plant-based proteins and starches have versatile applications. The long-term expertise in managing supply chain volatility has enabled the industry to reorganise logistics when necessary, for example when it was recently needed due to the Ukraine war.
- **Commitment to quality and safety**: The industry adheres to strict EU food safety regulations, ensuring high product quality. Continuous innovations in food safety measures, combined with compliance efforts, maintain high food and feed safety standards, benefiting European consumers.

[2] Includes some data from the secondary processing industry as well.

- **Resource efficiency & waste reduction**: The industry has made progress in reducing its environmental impact. Many factories produce and use biomethane or have transitioned to biomass boilersand are contributing to decarbonisation efforts. Initiatives such as regenerative agriculture, agroforestry, and (close to) zero-waste processing are signs of the contribution of the sectors to improved sustainability. Residues are increasingly valorised—cocoa bean shells are repurposed for energy, vegetable oil residues for biofuels, and starch residues for biodegradable materials. The starch sector, in particular, plays a role in decarbonisation by developing alternatives to fossil-based industrial materials.

3.2 Weaknesses – Low margins and limited visibility

- **Limited bargaining power**: As a predominantly business-to-business (B2B) industry, primary food processors have limited influence in price negotiations. Being positioned between agricultural producers, secondary processors, and retailers, while being fairly invisible to the end customer, weakens its bargaining power. The industry often also does not get prominent attention in strategic European documents, like in the ECs Vision for Agriculture and Food (EC, 2025) and the FAOs State of Food and Agriculture (FAO, 2024), which makes its challenges more prone to fading to the background.
- **Low profit margins and high costs**: The industry operates with small profit margins, making it vulnerable to economic shocks. Rising costs of energy and raw materials further squeeze profitability of each sector. The need for significant initial investment in processing infrastructure, particularly in emerging segments like plant-based proteins, also poses financial challenges.
- **Energy-intensive operations**: The industry remains highly dependent on energy-intensive processes, with currently limited opportunities for electrification and use of renewable energy in some industries due to the specific nature of processing methods (e.g., heavy dependence on heat for evaporation) and the rural location of many facilities, which makes connecting to the grid complex, time-consuming and expensive. These constraints highlight clear areas for targeted innovation and efficiency improvements going forward. An exception is the milling sector, which is highly electrified. Continued reliance on fossil fuels due to limited possibilities for electrification contributes to high operational costs and emissions, posing a challenge in light of EU climate policies and carbon pricing mechanisms like the EU Emissions Trading System (ETS-2).
- **Vulnerability to climate change and agricultural yields**: The industry is heavily dependent on agricultural yields, which are increasingly affected by climate change, extreme weather events, and pests. The availability and quality of raw materials such as wheat, oilseeds, potatoes, and sugar beets are becoming less predictable. EU regulations limiting the use of plant protection products and contaminants further impact sourcing and increase reliance on imports.
- **Challenges in product differentiation**: Many products produced by the industry are bulk commodities, making it challenging to create differentiated products (starch products are an exception) or production processes (compliant with different standards of sustainability). The plant-based protein food market in particular faces a somewhat opposite issue, namely product proliferation due to many different standards throughout the EU (imposed by both regulators and the industry itself). Ensuring consistent quality and traceability across diverse supply chains is also a challenge.
- **Compliance burdens of EU regulation**: The sector faces EU regulations on sustainability reporting, food safety, and emissions, which are often complex and create compliance costs. Regulations such as the Corporate Sustainability Due Diligence Directive (CSDDD),[3] the Industrial Emissions Directive (Directive 2010/75/EU; IED 2.0)[4] as amended by EU Directive 2024/1785,[5] and the EU Directive on Deforestation-free Products (Regulation (EU) 2023/1115; EUDR – only relevant for soya and cocoa sourcing industries),[6] require significant resources and cooperation from chain partners to implement. Recent changes in regulatory scope have led to a loss of investments that were already made to ensure compliance. While the sector welcomes the recent simplification of relevant regulations, it would prefer more regulatory predictability, guidance and clarifications. Regarding, for example, the EUDR, the industry expresses concern about the implementation and practical feasibility of the requirements, including the chain of custody and legality requirements, which, in their view, could even pose a risk to supply security. More clarity of the procedures is needed, according to the industry representatives in our survey.
- **Workforce availability (relevant for some industries)**: Most of the industry is located in rural areas (the cocoa industry is an exception, being located mostly at ports), and access to skilled labour, with specialised expertise in processing technologies, is a challenge for the flour milling, starch and sugar processing industries. Other primary processors do not experience this issue.

[3] https://eur-lex.europa.eu/eli/dir/2024/1760
[4] https://eur-lex.europa.eu/eli/dir/2010/75
[5] https://eur-lex.europa.eu/eli/dir/2024/1785
[6] https://eur-lex.europa.eu/eli/reg/2023/1115

3.3 Opportunities – Contribution to bioeconomy and rising demand for (plant-based) sustainable products

- **Growing demand for sustainable and plant-based foods**: Changing consumer preferences, national dietary guidelines, and sustainability goals are driving demand for plant-based proteins, starch-based ingredients, bio-based materials and sustainably produced food. This presents growth opportunities for industries such as plant-based protein and oilseed processing. However, sugar and flour consumption is declining (see threats).
- **Bioeconomy and innovative products**: The development of bio-based alternatives for fossil-based materials presents new opportunities for the industry, while also reinforcing the food sector by increasing the competitiveness of primary processors. Oil- and starch-based bioplastics, biodegradable packaging, biochemicals and biofuels are expanding outlet markets. A comprehensive EU bioeconomy strategy could contribute to industry competitiveness. Additionally, the development of new products (e.g., cosmetics or gardening equipment from cocoa residues, fibres and oils from plant-based protein by-products) can be an opportunity for some of the sectors also.
- **Sustainable and climate-resilient farming**: Advancements in precision agriculture, new genomic techniques (NGTs) and climate-smart farming can improve quality agricultural yields and resilience against climate change. It could make the sourcing of key raw materials such as wheat, oilseeds, and potatoes, more secure.
- **Streamlining EU regulation for industry transition**: Streamlining EU regulations that help the industry make production processes more sustainable and improve access to renewable energy would support progress in decarbonisation. Proper implementation of regulations could improve the industry's reputation – as it could be seen as more sustainable – and tools like green claims and certifications could help the industry capture this value.
- **Digitalisation**: Better data collection and the use of data-driven technologies can improve traceability, information sharing along the chain, (sustainability) reporting and optimisation (in some cases) across all the primary processing industries.
- **Expanding global markets**: Emerging markets, particularly in Asia-Pacific, present growth opportunities for European starch-based, cocoa and plant-based protein products. Increasing global demand for diverse plant proteins also opens new trade possibilities, and diversifying trade relationships is also part of the EC's vision of agriculture for 2040 (EC, 2025).

3.4 Threats – Unclear path to decarbonisation, price volatility and rising geopolitical tensions

- **High energy costs and decarbonisation challenges**: Energy prices in Europe remain high, leading to increasing production costs. The industry must make substantial investments in renewable energy and emissions reduction. The perceived lack of eligibility to financial support in decarbonisation, due to being a predominantly energy-intensive industry – an inherent characteristic of current production processes - poses a significant threat to a fast and smooth transition. The fact that equipment will need to be changed, combined with unclarity around viable decarbonisation options, adds to the difficulty.
- **Price volatility and supply chain disruptions**: The industry is exposed to increasingly fluctuating prices of agricultural commodities and energy. Events such as geopolitical tensions and climate-related disruptions have created price swings of raw materials, especially in the case of potatoes and cocoa, and the continued volatility of these prices can pose a threat. Cereal, oilseed and sugar beet prices have surged in recent years, and all this has considerable effect on the oil, sugar, cocoa, flour and starch processing industry (Eurostat, 2025).
- **Geopolitical uncertainty and polarisation**: The current increase of political instability, global economic shifts, and unpredictability of trade decisions with looming trade wars (e.g., effects of the Russia-Ukraine war and US tensions), can lead to sudden trade shifts that could impact raw material availability and access to key outlet markets. Additionally, growing polarisation around sustainability (e.g., between meat, dairy, plant-based industries) when designing, discussing and approving regulations and future scenarios for the primary food processing industry can slow down the advancement of regulatory solutions due to a lack of alignment and will to compromise.
- **Increasing competition from third countries**: Imports from lower-cost producers, such as Brazilian sugar and Ukrainian cereals and sugar, pose a competitive challenge. Chinese pea protein is undercutting EU plant-based protein markets, while global starch producers benefit from lower production costs outside the EU.
- **Changing consumer preferences and market trends**: Declining consumption of key products, such as bread and sugar, poses a risk for a part of the processing industry. Additionally, certain food products made from ingredients produced by the primary food processing industry, face potential consumer resistance due to perceptions of being 'ultra-processed' foods.

- **Lack of harmonisation of EU regulation**: The EU Novel Food Regulation creates barriers for new plant-based protein ingredients, while labelling restrictions on plant-based alternatives complicate market positioning. Potential over-regulation, and the lack of harmonisation among EU member states and added national regulations create additional challenge for compliance.

Sources and literature

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