

P24 | TRANSITION ÉCOLOGIQUE ET SOLIDAIRE

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1. Purpose and Scope of the Report

This report provides an overview of the work conducted during last semester in our project. The scope of this study focuses on the legume supply chain in the Seine Aval region, with a particular emphasis on local legume production. The objective is to **analyse the current challenges and opportunities within this supply chain**, with the goal of contributing to the development of a more competitive and sustainable sector. This includes not only financial sustainability but also environmental and social considerations.

The project emerged from a combination of needs identified by our **primary client, Margaux Grosjean, Animatrice LEADER GAL Seine Aval**, and key insights provided during our academic discussions with Professor Éléonore Mounoud throughout the course. Our approach is multidisciplinary, incorporating field research, desk studies, interviews with stakeholders, and relevant case studies drawn from similar international contexts, particularly in Italy and Germany, as four of our team members come from these countries.

The primary goal of this study is to present a comprehensive analysis of the **current state (As is) of the legume supply chain in Seine Aval** and **identify strategic levers that can improve its value**. In a market where large scale retailers impose considerable pressure on prices, our project work aims to explore ways to improve the sector and facilitate its growth through innovative strategies that prioritize sustainability while integrating into the broader food system.

Additionally, recognizing the crucial role that local legumes can play in diversifying plant protein production in France, as well as improving food security and local economic resilience (Terres Univia, 2025), this report also **examines the influence of existing regulations** such as the *Egalim Law* and the *Plan Protéines* on the development of the sector.

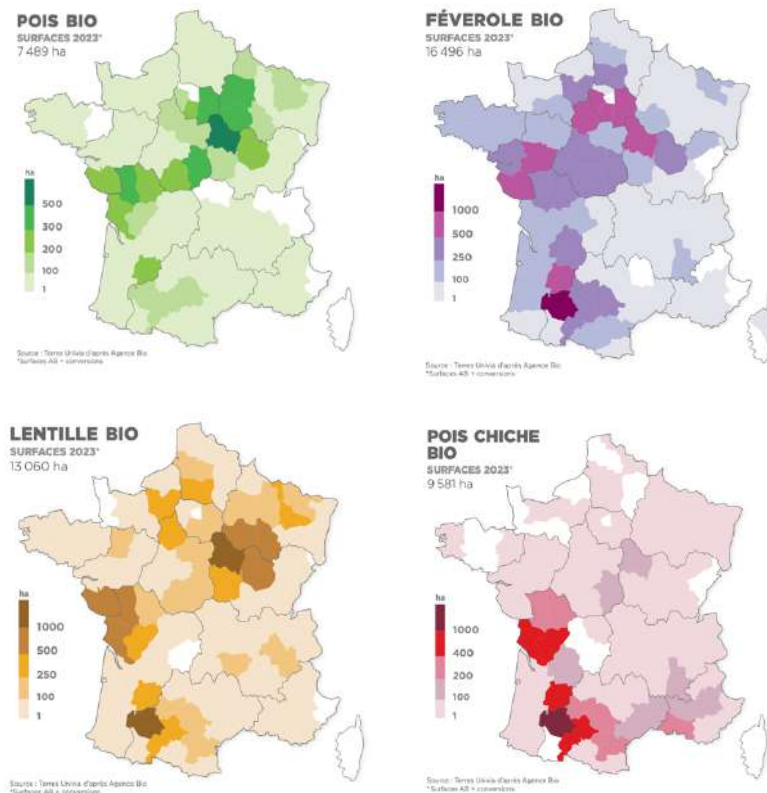


Figure 1: Legume production areas in France.

1.1 SWOT Analysis



Figure 2: SWOT analysis for the legumes sector.

At the beginning, we found it useful to run a SWOT analysis to get a clear picture of this sector; not only the potential and the opportunities, but also the weaknesses and the main drawbacks that can slow down adoption. The instrument makes one thing pretty obvious: legumes are a strong lever for a healthier and more sustainable food system, but **their uptake is still below what it could be**. The reasons are quite practical: time constraints, limited cooking know-how, and digestive concerns are real barriers for consumers. On the supply side, there are also problems like fragmented volumes, strict quality requirements, and limited local processing capacity. Scaling legumes requires work on both sides. **Demand side actions** (menus, recipes, communication, convenient formats) must go together with **supply side coordination** (aggregation, cleaning/sorting infrastructure, and longer-term contracts). Being explicit about these constraints doesn't weaken a pro-legume stance, it actually makes the transition more realistic and implementable.

2. Project Methodology: How We Worked

2.1 Project Logic and Approach

The project has evolved and continues to evolve through an **adaptive and exploratory approach**, rather than following a rigid methodology. Given the complexity of the legume value chain (and the challenges we faced in gathering information from farmers) and the wide range of stakeholders involved, we chose a flexible process that allowed the project to develop as our understanding of the context deepened.

The initial phase focused on **familiarizing ourselves with the project background, objectives, and the expectations of GAL Seine Aval, our project client**. We held 4 meetings with them in the first period to clarify expectations and align on how to move forward. This phase involved identifying the key stakeholders in the legume value chain, understanding the broader market and policy trends about legumes and plant-based proteins, and identifying the main challenges and opportunities.

As the project progressed, the team adopted a more practical and informal task distribution model, based on individual strengths identified through an **API8/Belbin team roles exercise**. The key roles within the team were:

- **Greta**, with strengths as a Team Builder/Coordinator, took the lead in ensuring alignment with the client’s expectations and fostering team cohesion.
- **Marco**, identified as an Implementer/Shaper, focused on structuring the work and transforming ideas into concrete outputs, particularly during the transition from analysis to actionable proposals.
- **Augustin**, as a Monitor Evaluator, was responsible for managing all client relationships within the French legume supply chain, given that he is the only French speaker in the team. This included handling interviews and communications.
- **Gianluca**, as a Completer Finisher, ensured that all tasks were carried out with attention to detail, maintained coherence across the project, and met deadlines, particularly in the final stages of preparing written documents and presentations.
- **Tassilo**, acting as a Team Builder/Coordinator, played a crucial role in maintaining communication within the team and integrating everyone’s contributions into a cohesive whole.

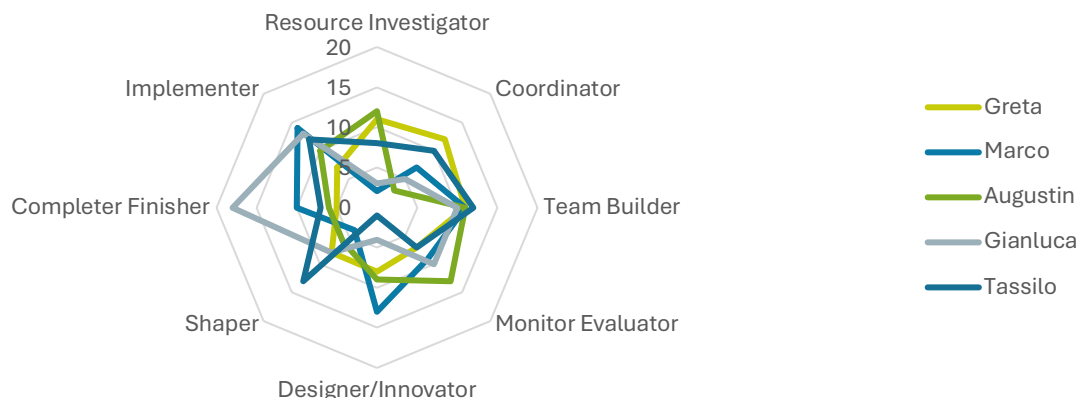


Figure 3: Belbin Team Graph.

Once a solid understanding of the context was created, the team shifted **focus to identifying bottlenecks and gaps within the legume value chain**, with particular emphasis on the disconnection between local production and institutional demand. Case studies from Italy and Germany have been incorporated to guide our analysis and proposals.

A mid project workshop was useful to review progress, identify any remaining gaps, and refocus on a manageable set of outputs. During this phase, the direction of the project was redefined to be sure that it remained both feasible and impactful.

In the final phase, the team went on to produce strategic proposals based on the earlier analysis: an educational campaign and a pop-up project looking to promote legumes in schools and universities. These proposals will provide a solid foundation for future work (which could be useful for the next team taking over in the next semester).

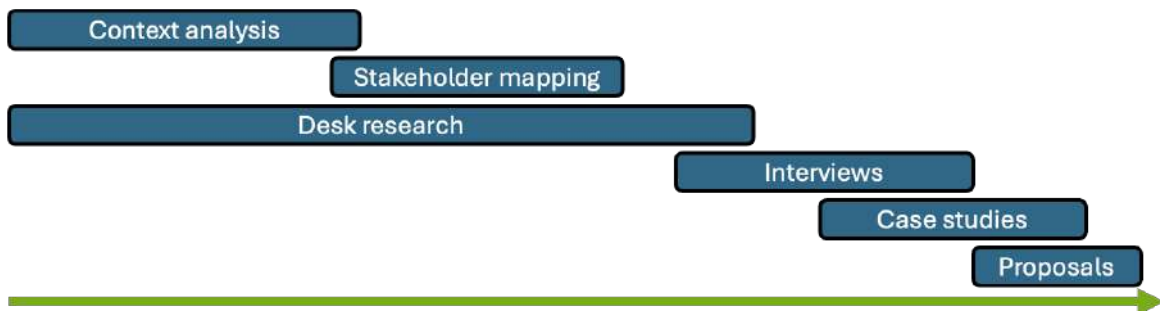


Figure 4: Process diagram of the workflow.

2.2 Sources and tool used

The project was primarily based on desk research and qualitative analysis, supported by internal project materials and comparative case studies.

Desk research involved a **comprehensive review of key policy and regulatory frameworks**, such as the *Egalim Law* and *Plan Protéines*, as well as **market data related to legumes and plant-based proteins**. This helped us establish the institutional and economic context for our analysis.

In addition to external sources, **internal documents** and PowerPoint presentations were used, either created during the project or provided by the client and supervisor, to ensure consistency throughout the work.

The team held preliminary **discussions with key stakeholders** from the retail and public catering sectors. These conversations offered valuable insights into demand-side challenges and operational constraints. We conducted interviews with several key stakeholders, including some farmers and processors, but we could not reach all the farmers originally targeted within the project timeframe. In addition, the team established contact and held a meeting with **Plant Based Universities**, an international association promoting the integration of plant-based meals in university catering systems. This exchange provided qualitative insights into how demand-side actors work with catering services, students and food service providers to increase the presence of legume-based meals in canteens. We had the opportunity to participate to a conference about legumes, in order to create new contacts and have the opportunity to talk with experts in this field.

3. Project Focus

3.1 Mapping the local legume supply chain

3.1.1 Structure of the Supply Chain

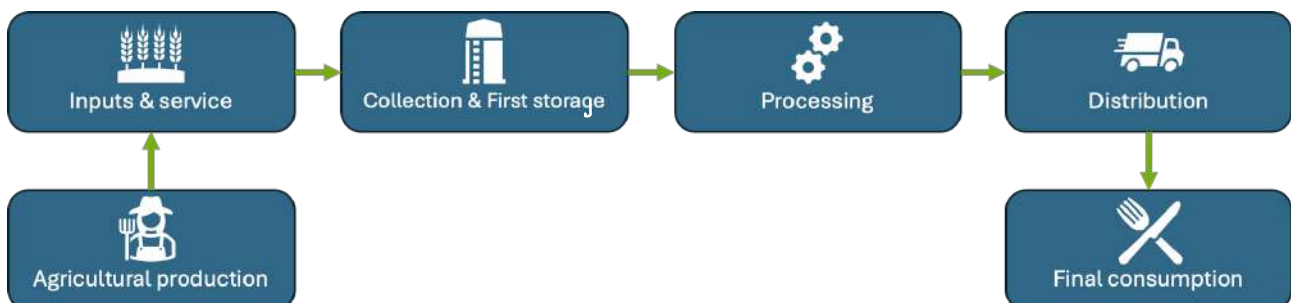


Figure 5: Supply chain of legumes.

1. **Inputs and services:** seed breeders and suppliers, suppliers of farm inputs (fertilizers, crop protection products, machinery, consulting services...).
2. **Agricultural production:** fields (wheat, barley, rapeseed) that include legumes in their rotations. In Seine Aval large cereal crops dominate, while legumes still represent only a small share of the agricultural area.
3. **Collection and first storage:** cooperatives and traders. They collect the product, dry it, clean it, and store it. A first sorting takes place between legumes for human consumption and for animal feed.
4. **Processing:** two main routes: processing for human food and processing for animal feed.

5. **Distribution:** national retail chains (all over France), bio/organic retailers, and local shops. There exist both short distribution chains (direct sales on farm, farmers markets, e-commerce) and collective catering (schools, canteens, hospitals, company restaurants, etc.).
6. **Final consumption:** households, collective catering, and the food industry, which uses legumes and legume portions as ingredients in processed products.

Extra-territorial flows: inbound flows of lentils, chickpeas, soy, and other legumes through ports and logistic hubs along the Seine (Rouen, Le Havre, etc.), competing with local production. Europe remains structurally lacking in plant proteins, and France still imports a large share of the legumes it consumes.

3.1.2 Key Observations from the Mapping

Taken together, these phases describe a legume supply chain in Seine Aval that is still emerging inside a territory historically based on cereal systems.

Upstream, choices by the farmers depend on the offer of seeds and inputs (machinery, equipment, services...), as well as on the technical and contractual frameworks provided by cooperatives and traders.

Midstream, these cooperatives and traders play a crucial role in aggregating product volumes and thus reaching critical masses; they also set quality standards and direct flows either towards manufacturers or towards processors, thus determining the added value developed locally.

Downstream, national retail chains are gradually being balanced by organic shops, local outlets, and public procurement in collective catering, which can act as levers to create demand for locally produced legumes.

However, the competitiveness of the entire value chain is strongly conditioned by imports from abroad entering through the Seine logistic hubs, in a context where Europe remains structurally dependent on external sources. This **trade-off between local procurement and global market pressures** is central to the future development and autonomy of the legume sector in Seine Aval.

3.1.3 Key figures on legume production, processing and consumption

Based on the qualitative mapping of the legume value chain, we will now take a closer look at quantitative figures on legumes at different scales, including national, local and consumer perspectives. First, production is analysed to gain an understanding of the producer's perspective. Afterwards, the processing and consumption sides are examined in more detail. This data helps to bridge the gap between production potential, processing capacity, and actual consumption.

Production

In 2024, 0.4 million hectares were used for planting leguminous crops. Surprisingly, **production fell by around one tonne compared to the previous year**, which corresponds to a share of approximately 10%. Despite this, France remains the second largest producer of legumes in the EU, behind Italy, which is the leader. It stands out in particular for its soybeans, peas and fève. The decline in production can be explained primarily by extreme weather conditions and the long-term reduction in cultivated areas since the 1990s. Among other things, this led to the loss of the winter pea harvest. A closer look at the product structure in 2024 reveals that soybeans accounted for the largest share at 41%, followed by peas at 35% and fève at 23% (Terres Univia, 2025).



Figure 6: Distribution of French legume seeds.

Looking at Figure 6, legume **production peaked in 1990** at 4 million tonnes and has **stabilised at around 1 million tonnes since 2007**. The reason for this is the decline in cultivated land, which is due to changes in agricultural policy and falling yields. This makes legumes **less competitive compared to other major arable crops**.

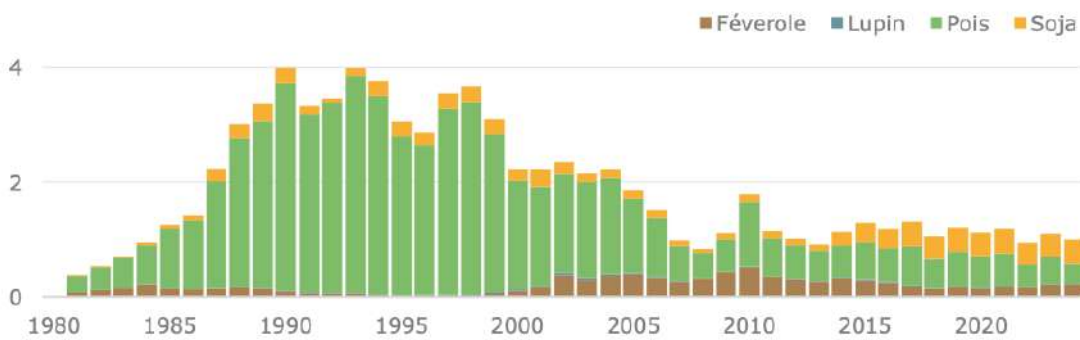
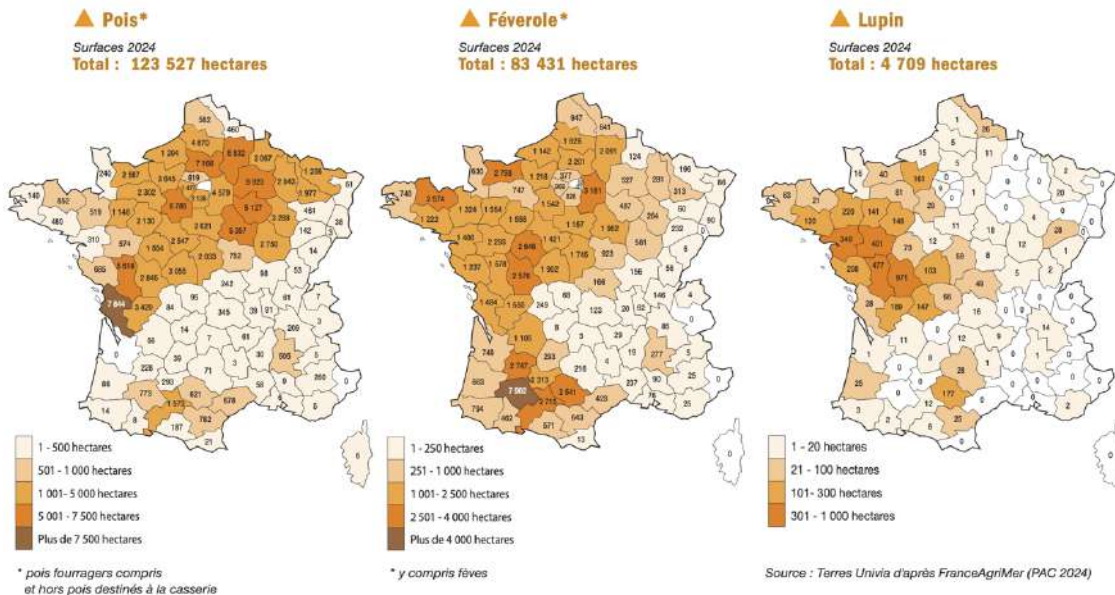


Figure 7: Development of grain legume production in France.

One ray of hope, however, is that legumes are particularly important in organic farming because they bind nitrogen from the air. Due to the current situation, organic lentils and soybeans are also in high demand.



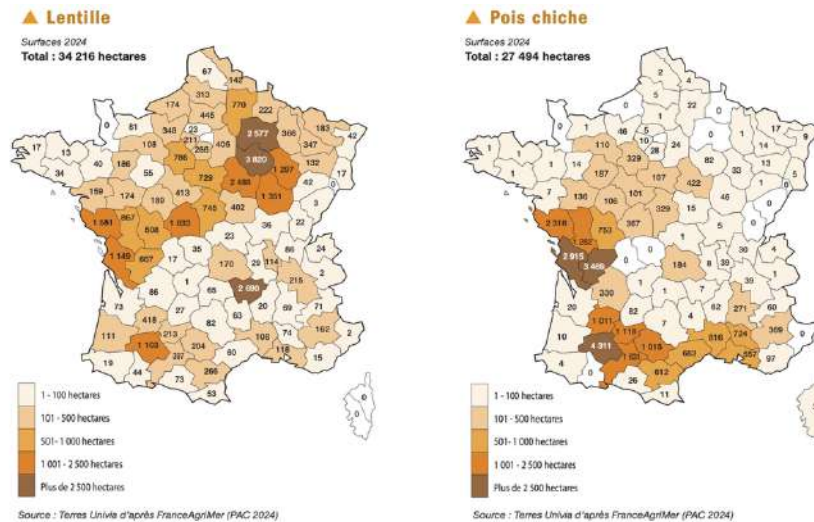


Figure 8: 2024 areas of peas, field beans, peas lentils and lupins.

Processing

On a national scale, France has significant industrial capacity for **processing protein**, particularly pea protein to be used in plant-based foods. However, most facilities are designed for large and standardized production volumes and are often disconnected from local sourcing strategies. To provide an overview of the location of a process step in the processing of pulses, Figure 9 has been included, showing the **location of the most important crushing plants in operation in 2024**.

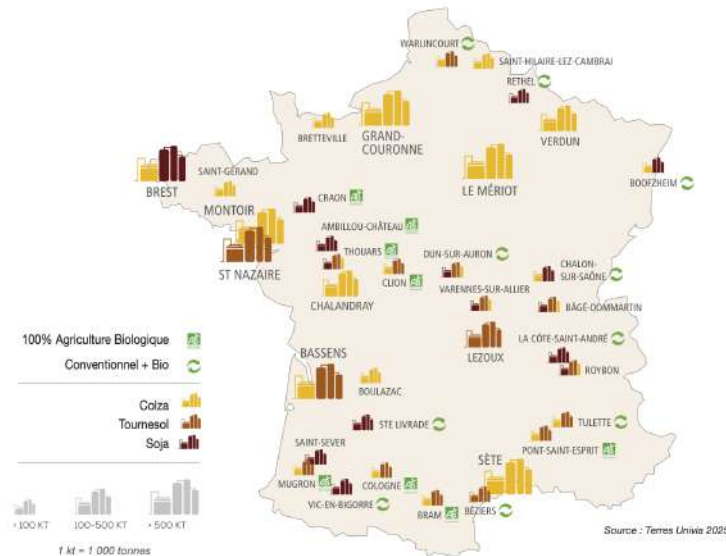


Figure 9: Location of the most important crushing plants in operation in 2024.

At the local and regional level, **Seine Aval lacks the necessary infrastructure for processing legumes** intended for human consumption. The existing storage and logistics systems are optimized for cereals, but processing legumes requires additional steps, such as cleaning, sorting, grading and packaging. Consequently, a significant proportion of locally produced legumes must be processed **outside the region**, thereby limiting local value creation.

In collective catering, legumes are mainly used in their simplest form, such as dry or cooked lentils, chickpeas and beans. *C'Midy*, for example, uses around 40 tons of lentils per year, which illustrates the importance of institutional demand, even when overall volumes remain modest.

Consumption

Figure 10 shows that the plant protein market in France is experiencing **steady growth**, reflecting rising consumer demand for plant-based diets. In 2024, the French plant-based food market reached approximately **€537 million**, representing an **increase of about 8.8% compared to 2023**, according to retail sales data. Beyond retail products, market forecasts indicate that the overall plant protein market in France is expected to grow from around USD 359 million in 2025 to about USD 462 million by 2030, corresponding to an **average annual growth rate of roughly 5%**. Within this market, the pea protein segment is expanding particularly rapidly.

	Sales value			Unit sales			Sales volume		
	2024, € million	2023-24 change	2022-24 change	2024, million units	2023-24 change	2022-24 change	2024, million kg	2023-24 change	2022-24 change
Chilled meat	155.7	15.5%	31.1%	50.8	18.6%	20.8%	9.0	12.1%	12.9%
Milk and drinks	224.6	6.2%	14.6%	106.6	5.1%	7.6%	107.0	4.5%	7.3%
Cheese	12.0	18.6%	58.7%	4.4	20.5%	52.8%	0.7	19.5%	48.7%
Yoghurt	102.3	4.1%	17.3%	46.9	2.2%	2.4%	22.1	2.8%	4.0%
Cream	43.0	8.9%	17.7%	23.6	10.1%	9.3%	7.7	11.3%	12.9%
Total	537.4	8.8%	20.5%	232.3	7.9%	9.9%	146.5	5.1%	7.5%

Figure 10: Overview of plant-based food sales by category in France, 2022-2024.

In 2024, pea protein revenues in France amounted to approximately USD 107 million and are projected to reach nearly USD 212 million by 2030, implying a strong annual growth rate of around 12%. This dynamic growth highlights the strategic importance of legumes, especially peas, as a key raw material linking agricultural production to high-value food and ingredient markets.

We will now look at the national level to reflect on the current status of legumes. This data can be used to deduce the status quo and possible future trends. *Santé Publique France* recommends that adults eat pulses **twice a week**. As the PNNS does not provide precise quantities, we have consulted the German national authority DGE, which recommends 60-70g of dry pulses per week. Per capita consumption of legumes in France in 2023 was around 2 kg per year per inhabitant. At first glance, this seems like a lot, but it has fallen by a factor of 4 over the last 20 years. This means that **consumption today is only about 30% of the recommended requirement** (Terres Univia, 2025).

At local and institutional levels, public catering represents a significant opportunity for change. While school and university canteens are increasingly including vegetarian meals, **legumes often appear as rather than as the main protein source**, as confirmed by our interview with C'Midy (Paragraph 3.3.1). Therefore, consumption is constrained by menu and regulatory frameworks.

A survey conducted by *Terres Univia*¹, illustrated in Figure 11, has shown that legumes are identified by 35% of consumers (behind meat, eggs and fish) as one of the richest sources of protein. 66% of respondents say they eat plant-based proteins such as legumes or grains on a weekly basis. The most popular sources of protein include lentils and wheat. Plant-based proteins, on the other hand, are very popular with consumers:

The survey also shows that 73% of French people consider them to be good for their health; 67% consider them to be natural; 66% believe that they contribute to a balanced diet.

¹ <https://www.terresunivia.fr/l-interprofession/actualites/proteines-les-resultats-du-barometre-consommateurs-2024>

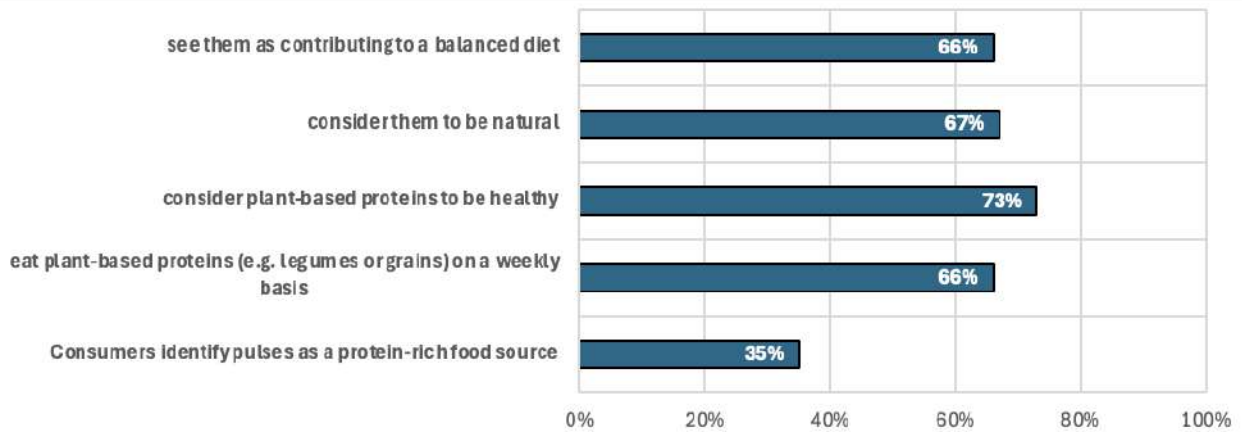


Figure 11: Consumption and awareness of plant-based proteins in France.

3.1.4 Self-conducted study on the consumption of legumes

Since we lacked updated data in particular, we conducted a study on the consumption behaviour of legumes among CentraleSup lec students in order to analyse the current situation and possible trends. A questionnaire with nine questions was created in both English and French. One part of the survey results is shown in Figure 12, while the detailed survey can be found in Annex 5.1.

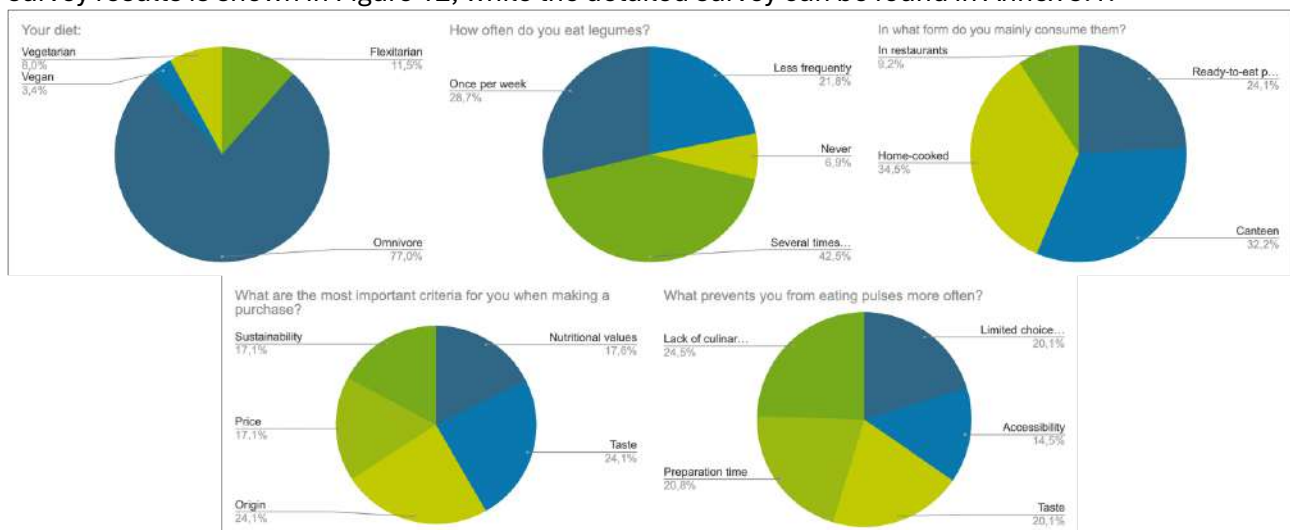


Figure 12: Self-conducted study on the consumption of legumes results.

Based on this survey, which collected 88 responses, mainly from university students of CentraleSup lec and Paris-Saclay, several patterns emerge regarding legume consumption. As university students, participants already consume legumes with around **70% eating them at least once per week**, but legumes are not yet a central component of their diet. Their consumption remains irregular and dependent on convenience and availability. The results show that legumes are not avoided for ideological reasons, but mainly because **they do not fit easily into students' everyday routines**. In particular, preparation time and lack of culinary knowledge account for almost half of the reported barriers, reflecting typical student constraints such as limited time and basic cooking facilities. The role of the university canteen is also significant. About one fifth of students explicitly mention the limited availability of legume-based options that are appealing for consumption. This suggests that **even motivated students may not consume legumes if they are not sufficiently present in the food offering**.

Overall, the findings show that legumes are not unpopular among students, but rather **insufficiently integrated into their food environment**. Increasing consumption therefore appears to rely less on changing students' attitudes and more on practical improvements, such as easier preparation methods and a more appealing legume offer in the university canteen.

3.2 Problem identification along the chain

3.2.1 On-farm Production Constraints

On the production side, Seine Aval is integrated in a wider **cereal-dominated farming system**, where protein crops and grain legumes still consist only a small share of cultivated land in France. This specialisation reduces the space available for legumes in crop rotations and maintains a strong dependence on synthetic fertilisers, with associated water-quality issues in the Seine basins (Agreste, 2024). For an individual farm, often in the 50-100 hectare range, dedicating even 5 to 10 hectares to a crop seen as “risky” can feel like a major decision. Legumes are perceived as **more uncertain** than wheat or rapeseeds because returns can be more variable and prices less predictable, especially without secure contracts or premiums (EAFRD, 2020). At the same time, not all farmers feel confident about the specific **technical requirements** (for instance, quality standards for human food). In the organic segment, which is important for legumes dedicated to human consumption, the recent decrease in organic sales in France has challenged processors and made farmers more cautious about converting or expanding organic legume fields, because they fear investing into a market that may not absorb their production (Girard, 2024).

3.2.2 Storage, processing and logistics bottlenecks

In terms of storage, processing and logistics, the existing infrastructure in the Seine Aval region has historically been built around cereals and oilseeds, not legumes. Grain silos and terminals in hubs such as *Rouen* and *Le Havre* are optimised for large flows of grain, while legumes destined for human consumption need more **specialised and dedicated operations** such as cleaning, grading, sorting and packaging (Haropa Port, 2023) (Rangarajan, Arumugam, Hampapur, & Brijesh, 2011).



Figure 13: Grain silo in Yvelines, Île-de-France.

These dedicated lines are often missing, undersized or geographically distant from production areas. At the same time, legume volumes are fragmented among many farms that cultivate relatively small areas, which makes it difficult to assemble homogeneous lots in sufficient quantities to meet industrial requirements (Magrini, Anton, & Cholez, 2016). As a result, the **unit costs of transport and storage are relatively high** for what is still a “niche” crop in the regional system. Part of the legume production must therefore leave the territory to be processed elsewhere, and it might only return in the form of finished product. This leads to a loss of value added and employment opportunities in Seine Aval, and it weakens

the economy for developing a more independent, locally integrated legume supply chain (Kezeya, Muel, & Smadja, 2020).

3.2.3 Demand and consumption barriers

On the demand side, **public-health guidelines in France recommend eating legumes at least twice a week**, which corresponds to almost 200 grams of cooked legumes per person per week. **But the actual consumption is much lower:** the average is about 30-35 grams a week, and only one adult in five eats legumes as often as recommended (Gérard, 2025). This gap reflects not only habits but also perceptions. Qualitative surveys show that **many consumers still see legumes as old-fashioned food, associated with low budgets or with vegetarian diets**, rather than as a modern and everyday protein source. They are also often considered **time-consuming** to cook and difficult to digest and are relegated to the status of a side dish instead of being used as a main course (Melendrez-Ruiz, Buatois, Chambaron, Monnery-Patris, & Arvisenet, 2019). Moreover, the market for plant-based products is growing rapidly in value, but a significant part of this growth relies on **ultra-processed food** that uses imported ingredients, and not necessarily local legumes. This means that even when the “plant-based” segment expands in grocery stores, **it does not automatically lead to a stronger demand for legumes grown in Seine Aval** (GFI Europe, 2025).

3.2.4 Governance and coordination failures

From the governance and coordination perspective, the agrifood system of the Seine Aval area is deeply integrated into global markets, with the ports of Rouen and Le Havre functioning as major hubs for cereal exports and imports (Reuters, 2025). The approach is focused on **large scale commodity trading**, rather than on building local and differentiated value chains. Within the territory, there is a multiplicity of stakeholders and initiatives, including municipalities, regional nature parks, and rural development programmes; although, they do not always lead to a long-term strategy focused on vegetable proteins. This fragmentation makes it difficult to organize a **collective action** to align objectives across farmers, cooperatives, processors, retailers, collective catering and all the other actors. In practice, this means that the large cooperatives and agri-food companies that dominate the flow of cereals do not systematically coordinate with smaller producers, short supply chain initiatives and public procurement actors (Magrini, Anton, & Cholez, 2016). As a result, opportunities to use tools such as public tenders, regional branding, climate and water policies or carbon schemes to structure a legume value chain at the Seine Aval scale are **only partially exploited**, and the transition towards a more protein-diversified, ecological system remains slow.

3.2.5 Processing and industrial ecosystem: actors, power dynamics and blind spots

While the production area and quantity of legumes have scaled up in recent years, **the rise of ultra-processed legume-based foods is not necessarily a clear opportunity for the sector**. It may instead shift value and control downstream (branding, formulation, retail power), capture margins away from farmers, and create new health and credibility risks. In the following, we discuss the key players in France, the dynamics at play, and the main blind spots.

Key actors behind ultra-processed legume-based products

The rapid growth of the plant-based food market has led to the expansion of ultra-processed legume-based products such as meat alternatives, protein-enriched snacks and ready-to-eat meals. These products are often marketed under **strong consumer brands**, while the underlying raw materials are supplied by a small number of ingredient processors.



Figure 14: Examples of ultra-processed legume-based products.

Large food manufacturers and retailers including multinational groups such as Nestlé, Danone, or specialized plant-based brands, capture a significant share of the added value through **branding, marketing and distribution**. In this model, legumes are primarily valued for their functional properties (protein content, texture, binding capacity) rather than for their territorial origin (Liebrich, 2017). As a result, even when legumes are grown in France, their transformation into ultra-processed foods **does not necessarily benefit local farming territories such as Seine Aval**. Raw materials may be sourced through globalized procurement channels, and processing may take place far from production areas; this underlines geographic and economic disconnections (Southey, 2023).

Competition and power dynamics along the chain

The industrial processing stage is characterized by significant **power asymmetries**. Processors and manufacturers benefit above all from economies of scale, technological control and market concentration. Their position of power enables them to impose quality standards, prices and contractual terms on upstream companies. Retailers and food manufacturers achieve downstream value creation through market access and consumer-oriented strategies, even when using relatively cheap raw materials.

In this context, ultra-processed legume products can weaken local legume value chains: while they increase overall demand for plant proteins, **they intensify competition for raw materials and reinforce industrial concentration**, rather than supporting local processing systems. This also creates direct competition between: legumes intended to local food uses (collective catering, short supply chains), and legumes absorbed into industrial protein markets, where price competitiveness and standardization dominate.

3.3 Stakeholder analysis: what we investigated

An essential part of the project was to assess the current state of the legume sector in the Seine Aval region. To do this, we tried to **contact as many stakeholders in this sector as possible**, from a wide variety of backgrounds. Only few of them responded, but the research allowed us to draw up a list of key players in the region, which could be useful in the future to bring them together and build an effective local network. For each contact, the main goal was to understand their situation and the issues arising from it; then, to come up with possible solutions based on their point of view.

3.3.1 Interview with L.Poyer from C'Midy

This interview focused on understanding how collective catering can act as a lever for the development of local legume production, through the case of **C'Midy**, a **public-private structure responsible for school catering in lower secondary schools**.



Figure 15: Logo C'Midy.

C'Midy was created to **facilitate catering management** across *collèges*, which previously operated under diversified systems leading to inequalities between establishments. A second major goal is to support local and short supply chains, notably by increasing the share of locally sourced products.

To facilitate local sourcing, the strategy prioritises existing production and processing facilities, rather than building new infrastructures from scratch. Around 85 establishments cook on site, while about 30 are supplied by a central kitchen, which conditions the type and volume of products that can be introduced.

Legumes have been promoted for several years within this framework, mainly as part of a protein diversification strategy. **Lentils are by far the most consumed legume** (around 40 tonnes per year), followed by chickpeas and red beans, although demand for the latter is declining. Local production also depends heavily on a small number of actors, such as Christian Hubert, whose collaborative production models have played a key role in structuring the sector.

Although legumes are cheaper and more accessible than animal proteins, their development faces a structural constraint: school catering regulations require the daily presence of a meat dish, a fish dish, and a vegetarian option. As a result, **legumes most often appear as side dishes or vegetarian meals** and remain in direct competition with meat, which is still preferred by students. According to Poyer, a significant expansion of legume-based meals needs stronger national policies promoting vegetarian diets, which is currently **not a political priority**. Other promising sectors include workplace catering, where adults tend to be more receptive, and the healthcare sector, where legumes make strong nutritional sense.

When selecting legumes, **the primary criterion is local origin**, not price. The budget is considered sufficient to avoid downward price negotiations, ensuring that farmers are paid fairly. Looking forward, the objective is to reach 35% local products by 2033, while also complying with the *Egalim* law. Currently, **local sourcing does not always comply with Egalim requirements**. Only 9% of agricultural land in the Yvelines is organic, and only a fraction of this production is suitable for collective catering. Politically, local sourcing is often prioritised in spite of compliance to the *Egalim* law: this leads to the idea of developing a “local *Egalim*” approach, aiming for 50% sustainable products including local ones, and gradually increasing the share of organic products up to 20%.

A major challenge remains the **limited number of farmers** engaged in organic production. Transitioning agricultural systems requires long-term commitment, both to expand cultivated areas and to convince farmers about the economic viability of these crops. Past experiments, such as hectare-based subsidies for diversified cropping systems (tested in Montpellier), show some potential but also highlight the need for strong monitoring and support. Today, legume crops are not automatically considered low-input systems, as they may still rely on herbicides and soil treatments. Unlike organic farming, **they lack formal recognition for their environmental benefits**, which limits access to public subsidies. Improving financial support for organic farming is therefore a key factor.

Finally, the interview highlighted weaknesses in contractual agreements between farmers and large catering operators like Sodexo. The **lack of solid long-term contracts** creates insecurity for farmers who must invest heavily without guaranteed results. While public catering in *collèges* represents a significant and relatively stable market, private operators' profit goal prevails at the end.

3.3.2 Interview with Adeline Screve from Protéi'sol

This interview focused on the role of **Protéi'sol**, an organisation working on food and feed supply chains, particularly plant-based proteins. Its approach is rooted in concerns over deforestation due to imported soy, which has pushed the search for local protein alternatives and the reduction of dependency from soy, especially in animal feed. Through partnerships with private companies, *Protéi'sol* aims to **promote locally produced protein sources**, mainly legumes, thereby contributing to food sovereignty and improving the carbon footprint of agricultural systems.



Figure 16: Protéi'sol project launch.

Protéi'sol initially collaborated with *Lidl* to assess whether soy-free alternatives could be developed. The results showed that such alternatives are technically feasible, but that they have a higher cost compared to imported soy. Another key constraint is the limited availability of protein crops currently grown in France.

To address these challenges, *Protéi'sol* has launched a territorial project aimed at reviving legume production among **large-scale farmers**, thanks to regenerative agriculture. In this context, *Protéi'sol* works with the cooperative *Terr'Innovia*, which trains agricultural technicians to support farmers in optimising legume production. The project currently involves around 30 partner farmers.

A central objective is to **stimulate demand from private actors** such as *Lidl*, *Les Mousquetaires*, *Auchan*, and *Purina*, creating stable outlets for locally produced proteins. The project is financed over a three-year period through a combination of public funding (from regional authorities and the European Union) and private contributions. While no quantitative targets were required to obtain public subsidies, the long-term challenge lies in establishing a financially viable and self-sustaining model that fairly pays off all stakeholders. The project was launched in early 2024.

As of today, **locally produced legumes are still more expensive than imported soy**, but this price gap is partly addressed through public funding. The crops involved are not certified organic, so they cannot benefit from current environmental labels.

In conclusion, *Protéi'sol* highlights key conditions for scaling up local protein supply chains: cooperation among private companies, risk-sharing mechanisms and insurance schemes for farmers, public funding, etc. A further challenge lies in reducing competition with highly profitable crops like potatoes, in order to push more farmers to allocate land to legumes. Overall, the interview underlines both the potential and the constraints of transitioning towards locally sourced systems in France.

3.3.3 Interview of Plant Based Universities (PBU)

Plant Based Universities (PBU) is an international association working to increase the availability of plant-based meals in university catering. Its approach is based on practical cooperation with catering services, student representatives and food-service providers. A core element of their approach is the development of ready-to-use recipes based mainly on **minimally processed legumes** (lentils, chickpeas, beans), designed to fit the technical and organizational constraints of collective catering.



Figure 17: Logo Plant-Based Universities.

PBU has also established a working group involving *CROUS* and private food-service operators, including the company managing vending machines at *CentraleSupélec*, with the aim of **better coordinating food supply, catering operations, and student needs**.

This exchange highlighted a concrete opportunity for collaboration. PBU's network with university catering services could provide a valuable help to better understand demand volumes, menu constraints and the quantities of legumes required from local producers. In turn, our project could contribute a broader territorial perspective by combining data on local production capacity, supply chain constraints, and policy frameworks, helping to align supply and demand more effectively around legume-based meals in collective catering.

3.3.4 Interview with Alain Defresne

Alain Defresne is a producer in Essonne who has been growing lentils and beans (*fébroles d'hiver*) for five years. He had also tried protein peas but those attracted pigeons too much. The beans are then sold to local cooperatives and the lentils distributed through Christian Hubert's network. Even though such cultures are quite risky because they are very much subject to hydric stress and storms and are a bit fragile, he manages to make it work thanks to a **seed contract** (for example, this year he committed to planting 15 hectares of fava beans and 3 hectares of lentils). These crops are roughly profitable when they hold up, but obviously not at all when they fall to the ground with the rain, so these contracts help to secure revenue (it is rewarded 90€/ha), while ensuring a substantial planting area available also for other crops. In exchange for all this, the contract generally requires a **20% annual production of protein crops**, which can be quite restrictive, particularly because of the seasonal rotations that must be carried out between different crops, which can contribute to soil fatigue.

Another difficulty lies in the fact that subsidies usually take a long time to arrive or that the terms of the contract may change once the farmer has already started the season, which makes it hard for them to adapt. Protein crops are still attractive because of the nitrogen they provide, the little maintenance they require, and the fact that they are crops that appeal to "investors" since they allow for the use of fewer plant protection products.

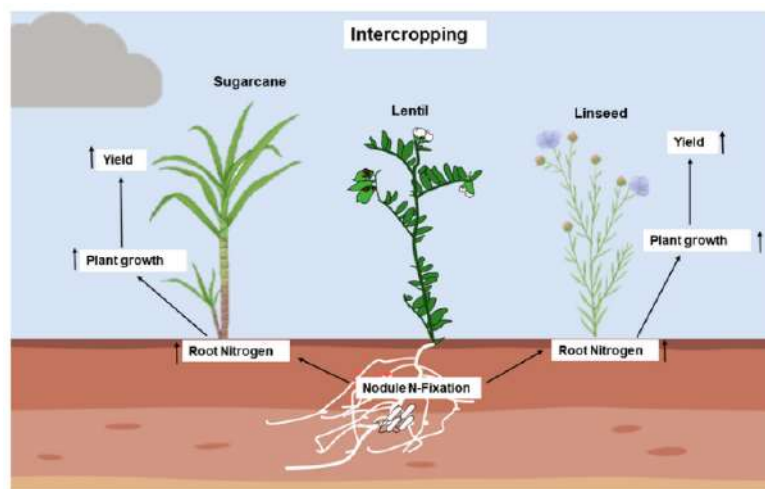


Figure 18: Intercropping of lentils and spring wheat to reduce lodging risk.

One technique Mr Defresne is currently developing involves **planting spring wheat** alongside protein crops to act as a support and prevent them from falling over in storms. This would increase yields, but as these plants consume a lot of water, it could hinder the growth of lentils: it remains to be seen whether there are any real benefits in terms of yield. There is also a coordination problem: the wheat ripens a week after the lentils, so the lentils have to stay outside for an extra week, at the risk of being caught in a storm. Spring oats would ripen faster but are less effective as a support than wheat.

Finally, there is a legislative issue regarding herbicides: in theory, wheat cannot be grown with an herbicide intended for lentils, even though in practice this works very well. Similarly, to remove weeds, a product that is approved for wheat but not lentils would have to be used. "If they want us to practice intercropping, they first need to solve the administrative ambiguities."

3.3.5 Events Académie du Climat Merveilleuses légumineuses

At the “**Merveilleuses Légumineuses**” conference held at the *Académie du Climat* in Paris on January 15, 2026, we (Marco, Greta, and Gianluca) had the chance to listen to **six speakers** (a mix of researchers and practitioners from the sector) who shared their work on legumes and plant proteins in the local context, whom we listed in Figure 19.



Figure 19: Speakers at Merveilleuses légumineuses from the left to the right: Alix Mennella - Responsable du plaidoyer pour l'AVF, Bente Svane - SEGES Innovation Denmark, Jeroom Remmers - Directeur de la TAPP Coalition, Julia Bognar - Director for Climate à l'IEE.

A big part of the discussion focused on the same bottleneck we are seeing in Seine Aval: **limited demand from final consumers**. Several speakers explained that many people still don't cook legumes often because they don't know how, they think it takes too long, and most definitely they do not really consider legumes a “real” protein source. These points match what we also observed in our own survey. They also shared astonishing figures, such as the idea that **average annual legume consumption has fallen from 7,2 to 1,2 kg per person** between 1920 and 2020. Another key insight was the social “paradox” around legumes: those who eat them regularly tend to be people from more comfortable, educated backgrounds (often more sensible to environment and social issues related to alimentation), while lower-income classes generally rely more on meat (and often times low-quality meat) because it is perceived as the only veritable source of protein.

We also found it useful to hear an international perspective: Bente Svane, a Danish researcher, described how, in Denmark, **cooperation between independent farmers** (shared equipment, coordinated pricing, and collective strategies to support conversion etc.) can help build a stronger legume sector and better resist pressure from large corporations. This is an approach that could be interesting to adapt to the French context. Finally, two members of the vegan advocacy group **AVF** contributed with a more activist perspective on shifting food culture and consumer habits. Overall, the event was very valuable: it gave us extra data and, furthermore, it confirmed our views.



Figure 20: The group visiting the Académie du Climat.

3.4 Market and policy context

Legumes have become a **strategic food category** in France at the intersection of agricultural policy, public health, environmental transition, and market transformation. Their importance is the result of normatives such as the *Egalim* law, national investment strategies like the *Plan Protéines*, evolving public catering obligations, and the rapid growth of the plant-based food market.

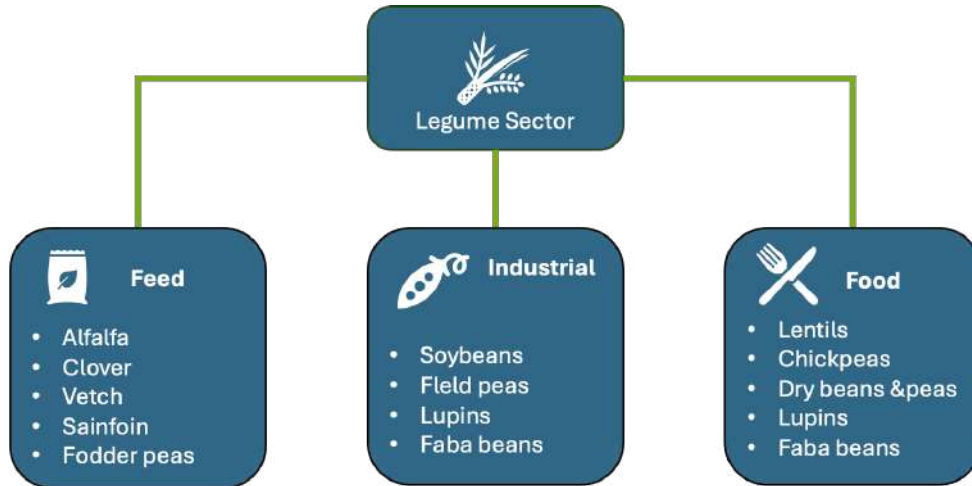


Figure 21: Fields in the legume sector.

3.4.1 Egalim Law: Structuring Demand for Sustainable Food

The *Egalim* law was introduced by the French government in 2018². To improve conditions for farmers, it was reinforced twice: once in *Egalim 2* (2021)³ and again in *Egalim 3* (2023)⁴. First in *Egalim 2* (2021), and then in *Egalim 3* (2023). The law aims to **rebalance the agricultural and food market** by ensuring fair payment for farmers, promoting healthier diets, and reducing environmental impact. One of the measures is the requirement for public catering establishments, such as schools, hospitals and universities, to provide at least 50% of their food products from sustainable sources, including 20% organic ingredients. Specially legumes benefit from this requirement, as they are affordable, nutritionally dense, can be cultivated locally and are compatible with organic and low-input farming systems.

By integrating legumes into public menus, *Egalim* creates stable institutional demand, thereby reducing market uncertainty for producers while supporting dietary diversification and lowering environmental footprints.

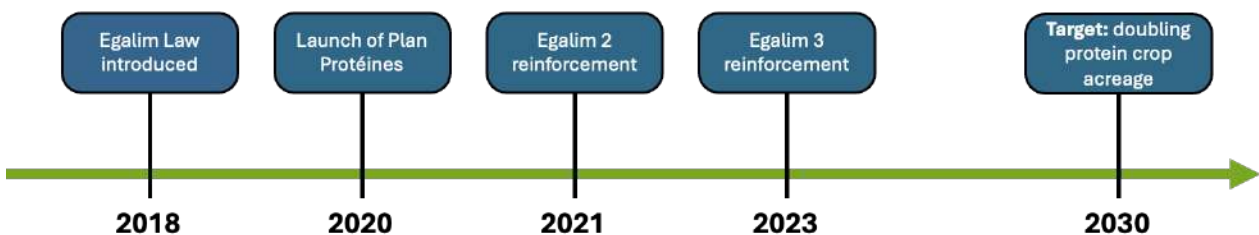


Figure 22: Timeline of legal developments in the legume sector.

² https://www.legifrance.gouv.fr/contenu/Media/Files/autour-de-la-loi/legislatif-et-reglementaire/etudes-d-impact-des-lois/ei_art_39_2018/ei_pjl_alimentation_cm_31.01.2018.pdf

³ https://www.legifrance.gouv.fr/download/file/H51ffEOJ34BXsDeDDVSrr4iX_erjxoTD_Jy3AVXRfk=/JOE_TEXTE

⁴ <https://www.legifrance.gouv.fr/download/pdf?id=8KgwTjiEz3YNfUfX6bVTtq3U0jSD7UEbpl3dAMzpeEM=>

3.4.2 Plan Protéines: Rebuilding Protein Sovereignty

France's *Plan Protéines* (launched in 2020) responds to Europe's strong **dependency on imported soy** for animal and plant proteins. With a budget of around €100 million, the plan aims to double the acreage of protein crops by 2030, including peas, lentils, chickpeas, faba beans, and lupins. Legumes are central to this strategy because they combine agronomic benefits (nitrogen fixation, reduced fertilizer use, lower water demand) with food-system resilience, aligning climate objectives with farmer income stability (Ministère de l'Agriculture, de l'Agro-Alimentaire et de la Souveraineté Alimentaire, 2021).

3.4.3 Public Catering: A Key Leverage Point

Public catering acts as a powerful driver due to its scale and regulatory framework. As shown in the Yvelines example with *C'Midy*, which serves around 35,000 meals per day, public kitchens already integrate local lentils and vegetarian options, supported by centralized procurement and sustainability targets. Legumes are particularly suited to public catering because they are **cost-effective, nutritionally rich, and culturally adaptable**. When included in procurement contracts and menu planning, they create long-term outlets for local farmers, while also educating younger generations about sustainable diets (Agreste, 2024).

3.4.4 Market Growth: From Policy to Consumer Demand

In France, the growing importance of legumes is closely linked to the rapid **expansion of the plant-based food market**. In 2024, the French plant-based market reached approximately €537 million, with annual growth close to 9%, and forecasts indicate continued growth toward 2030. (Mordor Intelligence, 2025). This trend is driven by changing consumer habits, increased awareness of health and environmental issues, and the diversification of plant-based products (Grand View Horizon, 2025).

Legumes, particularly peas, lentils, chickpeas, and beans, are central to this growth. **Pea protein** has become the dominant ingredient in French meat alternatives and is used in food-service and public catering due to its functional properties, local availability, and cost efficiency. The pea protein segment is expected to grow at double-digit annual rates, reinforcing demand for domestically produced legumes.

This market dynamic creates new economic opportunities for French farmers and cooperatives by **connecting agricultural production to high-value food markets**. Combined with public policies such as the *Egalim* law and the *Plan Protéines*, market growth supports regional value chains and confirms legumes as a strategic pillar of France's food transition (Grand View Horizon, 2025).

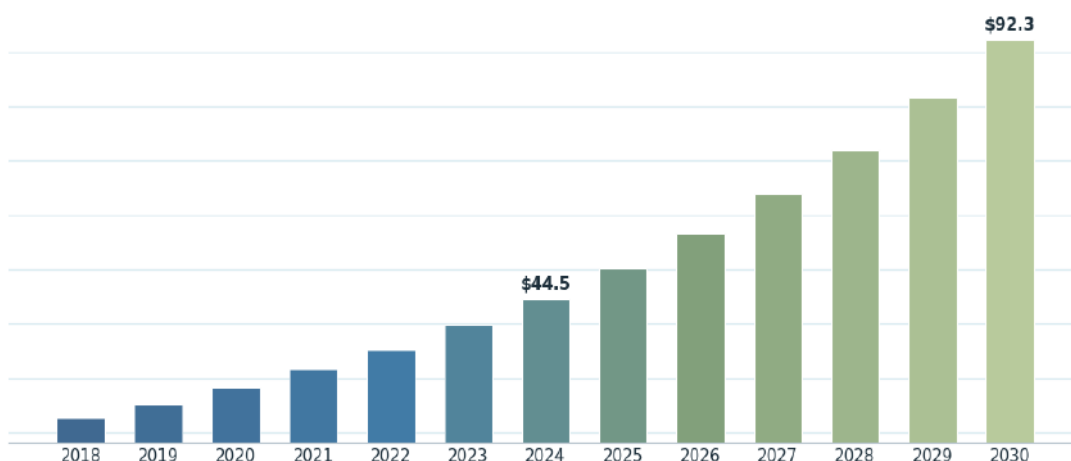


Figure 23: France pea protein market development (million USD).

3.5 Comparative case studies

In the early stage of the project, we ran a comparative scan of a few Italian and German examples, mainly to stress test mechanisms (what could be transferable) rather than to recommend copy and solutions. Over time, this became clearer: several of these cases are directionally inspiring, but only **partially address the constraints we face in Seine Aval** (volumes, procurement rules, acceptance in school catering, and day to day operations). On the Italian side, **AMÍO** (ILTA Alimentare)⁵ is interesting because it shows a managed, traceable supply chain from farms to packaging, with a single coordinating operator linking production, processing and distribution. From an operations perspective, the takeaway is not the brand itself, but the **system logic**: aggregation of volumes, standardization, and credibility through origin/traceability (exactly the type of reliability institutional buyers needs). The **“Aggiungi un legume a tavola!”** (“Add a legume to the table”) initiative is almost the opposite lever: it builds demand and social legitimacy through chefs, restaurants and storytelling during a dedicated week, which is useful to shift perceptions (especially among younger consumers) but needs to be anchored to purchasing channels to create stable demand.



Figure 24: Italian Company' ready-to-eat legumes meals.

In Germany, the **StudierendenWerk Berlin**⁶ example is relevant because it gives plant-based catering as a complete delivery model (values + affordability + education), with a very high share of vegan/vegetarian dishes and low prices (~€1.55), showing that change can work at scale in everyday service conditions.

At the same time, we looked at **“innovation driven” routes** such as *Project Eaden* (fibre-spinning to replicate meat texture). These solutions can improve acceptance, but in this project they remain only a partial answer: they risk keeping the transition locked into *processed* alternatives, whereas the bigger structural gain is to make simple, repeatable, canteen compatible recipes with minimally processed local pulses the default option (and use communication/education to make them desirable).



Figure 25: STW Berlin's main university canteen offers a wide range of legume-based meals.

⁵ <https://www.amiolegumi.it/>

⁶ <https://www.stw.berlin/>

3.6 Our Campus Proposal and Campaign Benchmarks

3.6.1 Campus pop up activation

Building on the insights gathered throughout this report and our field investigation, we propose a simple, low cost and replicable solution to increase legume consumption among university students (18–25) in the Seine Aval territory. We focus on students because they are regularly exposed to campus food environments (canteens/CROUS facilities) and can be reached efficiently during high traffic moments (lunch time, campus events, job fairs, Forums, lectures).

Despite strong nutritional and environmental arguments, legume consumption among young adults remains below potential. What holds this group back is rarely price or availability; it is mostly **lack of habit, perceived preparation time, and limited culinary inspiration**, as also suggested by our survey. This is why we prioritise an **experiential activation** over a purely informational campaign: students need something that turns legumes into a concrete action.

The objective is not awareness per se, but **short-term behaviour testing and habit initiation** within existing campus food settings. The pop-up is designed as a simple behavioural funnel:



- **A small stand** (roll-up + table) is placed near the canteen entrance or major campus events with one clear promise: quick, tasty, budget-friendly legumes.
- **Micro-degustation** (max 2 bites): one comfort option (*example*: lentil bolognese on toast / chili bite) + one fresh option (*example*: hummus or chickpea spread with vegetables).
- **Mini-game** (60-90 seconds): simple “spin the wheel” (physical or tablet) with prompts such as Myth vs Reality, Guess the legume, 15-minute challenge, Legumes around the world.
- **Rewards**: everyone scans a QR code to access a digital pack (short recipe booklet + shopping list + digestion tips). A few winners receive a minimal printed A6 booklet (8-12 recipes) plus a small sticker/canteen marker.

The pilot runs **2 hours at lunch time** (canteen) or **3 hours at a major campus event**. To keep evaluation credible but light, we track: **tastings served, QR scans, downloads/landing-page visits**, and a **30-second micro-survey** (liking 1-5; intent to cook again this week yes/no; main barrier: time/ideas/taste/digestion).

3.6.2 Current promotional campaigns on legume (benchmark review) Beyond the pop-up itself, we think that a key success factor is **communication**: to scale legume adoption, we also need **campaigns that make legumes feel more desirable** and “sexy”, not just “healthy.” Today they are still often perceived (especially by young consumers) as boring, not tasty, and not very engaging (a pattern that also appears in our survey feedback). For this reason, we **reviewed a set of current promotional campaigns** in France to understand what tones, formats and channels are already effective at reframing legumes and reducing usage barriers.

Vivien Paille’s “**Sec is Good**” is a brand campaign designed to reframe dried pulses as modern and desirable rather than old fashioned. It uses a provocative and playful tone and joins it with educational content (“Sec Éducation”) that reduces usage barriers by explaining how to cook and incorporate legumes. The concept is reinforced through **PR-style events** (such as pop-up stores), combining brand

attitude with practical purposes. “Sec is Good” is in our view one of the most effective French campaigns because it tackles the main problem head-on: **dried pulses are often seen as boring or inconvenient**. The goal of our own campaign would revolve around making legumes more appealing to people, not just to find meat alternatives.



Figure 26: Promotional Campaign of Vivien Paille (Store and dépliant).

“**Une idée légumineuse!**” is a French multi stakeholder initiative that brings together organizations such as **Terres Univia, Interfel, FNLS and FIAC**. Launched around 10 February (the International Day of Pulses), it is structured as an ongoing campaign with a specific target audience: young people (8–18) and parents as primary targets, plus dedicated kits for school catering/collective dining and for health/nutrition professionals. Its strength lies in its **comprehensive approach** (recipes, kits, demo videos, youth-oriented press, social content, and school material etc.) which makes it a strong benchmark for institutional campaign designing.⁷⁸



Figure 27: Campaign regarding "la Semaine des Legumineuses".

FILEG Occitanie also proposes a “Semaine des légumineuses”, a recurring regional activation built around a themed week (typically in February) with strong ties to restaurants and chef ambassadors. The format focuses on “trial through experience” by encouraging restaurants and collective catering (including school canteens) to feature legume-based menus, supported by recipes and digital content. Local partnerships such as collaboration with Toulouse Métropole help to promote the initiative in the

⁷ https://www.interfel.com/wp-content/media/2022/11/9576_Le_Savoir-faire_des_legumineuses_web_V2_houmous.pdf

⁸ <https://www.terresunivia.fr/fichiers/autres-publications/une-idee-legumineuse-livret-recettes-bd.pdf>

local territory and public stakeholders, thus offering a replicable model where adoption is driven by the menu itself rather than awareness alone.⁹

FNLS (often in collaboration with ANILS) developed “Les Super Légumes / Super légumes secs” as an educational campaign aimed at children, using superhero characters linked to different legumes to make the category engaging and fun. The concept is delivered through pedagogical kits and materials, supported by playful videos and children-friendly content. This campaign is interesting although not particularly relevant for our case, since our project does not solely involve youth audiences.¹⁰



Figure 28: Example of “Les Super Légumes / Super légumes secs” as an educational campaign.

The institutional communication campaign “Légumineuses, graines d’avenir” refers to informational content, often in infographic form, distributed through official or semi-official channels (ministries and public portals). The emphasis is on contextual data and evidence-based benefits related to health, environment, and broader food-system goals, but we find that it is not the most persuasive. Infographics and fact-led messaging work well as supporting proof, but they typically do not create desire or cultural momentum without a stronger emotional side. Despite containing less “big-idea advertising” than the other examples, it is a useful reference for building credible “facts and benefits” advertising and for bringing complex arguments into accessible visuals.¹¹



Figure 29 : The institutional communication campaign « Légumineuses, graines d’avenir ».

⁹ <https://www.fileg.org/la-semaine-des-legumineuses>

¹⁰ <https://www.legume-sec.com>

¹¹ <https://agriculture.gouv.fr/infographie-les-legumineuses-graines-davenir>

4. Conclusion and next steps

4.1 What we achieved so far

This project made it possible to **build a clear and structured understanding of the legume value chain in the Seine Aval territory**. Through desk research, document analysis, stakeholder exchanges and comparative case studies, the team identified the main actors involved, mapped key stages of the chain and highlighted the central role that public catering can play in supporting local legume production. We conducted a survey among the CentraleSupélec community, which let us better understand the main constraints linked to limited demand by final consumers.

A key outcome of the analysis is **the identification of structural gaps between local production, processing capacity and demand**. Although policy frameworks, such as the *Egalim* Law and the *Plan Protéines* provide a favourable context, their concrete implementation remains constrained by logistic bottlenecks, fragmented governance and limited visibility regarding the outputs. Another output was an analysis of the **main promotional campaigns** related to the legumes sector, carried out by various institutions in France; we tried to propose our own campaign which could be implemented in occasion of the International Day of Legumes.

Beyond analytical work, the project also enabled the establishment of **concrete contacts with external actors**. In particular, the exchange with *Plant Based University* opened perspectives for collaborating with universities catering services and *CROUS*, highlighting the path towards integrating legume-based meals into catering. This represents an important step for moving from analysis to operational opportunities, as was also highlighted in our survey.

4.2 What remains to be done

To move from analysis to implementation, some steps remain necessary.

First, the definition of a **pilot case study**, conceived as a methodological guide to connect local legume supply with institutional demand. This pilot should provide a solid foundation for future action.

Second, the **project requires deeper engagement on the supply side**. Interviews with more farmers, cooperatives and processors were planned but could not be completed within our timeframe. These exchanges are essential to better assess production capacities, cost structures, and the feasibility of long-term contractual agreements.

Moreover, the **demand-side analysis needs to be strengthened**. To deepen the understanding of demand, the team has designed a student survey, available in both French and English, aimed at capturing current eating habits, preferences, and openness toward legume-based meals. The **dissemination and analysis of this survey** represent an important next step to better estimate realistic demand volumes and inform menu design (see *annexes*).

Pilot collaborations should also be tested in real catering contexts. Further collaboration with *Plant Based Universities* and their catering partners, including *CROUS*, could help test concrete implementations, precise demand estimates, and support the development of legume-based menus connected to local production.

Finally, following the *Merveilleuses légumineuses* conference, we obtained the contact information of Alix Mennella, from the AVS association. We **suggested a call** with her to obtain more information and to further analyse their organization and studies. Her email address can be found in the next paragraph.

4.3 Limits, errors and data gaps

This project has some clear limitations:

- The analysis was mainly based on desk research and qualitative information, with limited data collected directly from farmers and processors. As a result, some estimates related to production volumes, costs, and logistics remain indicative.
- Contact with stakeholders was also uneven. While discussions with institutional and demand-side actors were possible, engagement with farmers and processing actors was limited, which reduced the level of detail on on-farm and processing constraints.

The project does not provide a ready-to-implement operational plan. It should be seen as a **foundation for future work, highlighting key issues, opportunities, and directions that can be further explored** through additional fieldwork and testing.

4.4 List of contacts of a few key actors

Even though very few people on the **list attached in the Annex (5.2)** agreed to talk to us, we believe that this list of contacts could prove useful for anyone wishing to continue assessing what is at stake with legumes in Seine Aval and in France. Although we cannot say for sure why those who didn't reply didn't, it is possible that our attempts to reach them from an unknown number or email address got considered as spam or just they didn't have the time or the will to reply to our questions. Finally, we believe it is far more likely for someone to respond if they are reached on their personal lines and not on a store phone number for customers for instance, but still it may be seen as indiscreet to directly try and contact them privately instead of going through the dedicated public channel. Therefore, even though we tried really hard to contact Christian Hubert and had both his personal phone number and email address this may have been specifically the reason why we didn't get an answer (however the "public" way didn't work either).





5. Annexes

5.1 Survey on legume consumption habits

Survey on legume consumption habits

Legumes are a variety of plants that include lentils, chickpeas, red and white beans, split peas and soybeans. They are rich in nutrients and their cultivation is beneficial for the soil (nitrogen fixation, low water consumption, etc.)

Your diet:

- Omnivore Flexitarien Vegetarian Vegan

How often do you eat legumes?

- Several times a week Ones per week Less frequently never

In what form do you mainly consume them?

- Home-cooked Ready-to-eat products
 Canteen In restaurants

What are the most important criteria for you when making a purchase?

- Price Taste Preparation time
 Nutritional values Sustainability Origin

What prevents you from eating pulses more often?

- Preparation time Lack of culinary knowledge Taste
 Accessibility Limited choice in the canteen

Would you say you have a good idea of how to cook pulses?

- Yes No

Would you be interested in a higher proportion of pulses as a source of protein in the canteen or cafeteria (rather than as an accompaniment to meat, for example)?

- Yes No

Do you think you will consume more meat alternatives in the future?

- Yes No

What would need to change for pulses to form a larger part of your diet?

Survey on legume consumption habits

Legumes are a variety of plants that include lentils, chickpeas, red and white beans, split peas and soybeans. They are rich in nutrients and their cultivation is beneficial for the soil (nitrogen fixation, low water consumption, etc.)

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- Home-cooked Ready-to-eat products
 Canteen In restaurants

What are the most important criteria for you when making a purchase?

- Price Taste Preparation time
 Nutritional values Sustainability Origin

What prevents you from eating pulses more often?

This is the **survey** we've prepared (there is also a French version). We distributed it in the **canteens at CentraleSupélec** to gather insights directly from students of our age.

From these surveys, we received **88 responses** from both French and international students, and we compiled them into a single Google Sheet.

(<https://docs.google.com/spreadsheets/d/1rNvnWamtJ2zksWpP4Ec9nnSU0bBP0dy1/edit?usp=sharing&ouid=103925746556277545643&rtpof=true&sd=true>)

Your diet:	How often do you eat legumes?	In what form do you mainly consume them?	most important criteria for you when making	what prevents you from eating pulses more often
Flexitarian	Less frequently	Canteen	Origin Price Sustainability	Taste Accessibility Limited choice in
Flexitarian	Several times a week	Canteen	Price Preparation time Taste	Lack of culinary knowledge
Flexitarian	Several times a week	Canteen	Origin Sustainability Preparation tim	Preparation time
Flexitarian	Several times a week	Canteen	Sustainability Taste Origin	Accessibility Limited choice in the can
Flexitarian	Several times a week	Canteen	Origin Nutritional values	Limited choice in the canteen Taste
Omnivore	Less frequently	Canteen	Nutritional values Taste Preparation	Lack of culinary knowledge Accessibil
Omnivore	Less frequently	Canteen	Sustainability Price	Preparation time Taste Limited choic
Omnivore	Less frequently	Canteen	Sustainability Taste Preparation time	Limited choice in the canteen Prepara
Omnivore	Once per week	Canteen	Preparation time Origin Price	Lack of culinary knowledge Preparatio
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Omnivore	Never	Canteen	Nutritional values Taste	Limited choice in the canteen
Omnivore	Once per week	Canteen	Taste Origin Nutritional values Price	Lack of culinary knowledge Limited ch
Omnivore	Once per week	Canteen	Nutritional values Taste	Taste
Omnivore	Once per week	Canteen	Price Taste Nutritional values Orig	Lack of culinary knowledge Taste
Omnivore	Several times a week	Canteen	Price Taste Preparation time Nutrit	Lack of culinary knowledge
Omnivore	Several times a week	Canteen	Taste Origin Preparation time	Lack of culinary knowledge
Omnivore	Several times a week	Canteen	Origin Preparation time	Lack of culinary knowledge
Omnivore	Several times a week	Canteen	Taste Preparation time	Preparation time
Omnivore	Several times a week	Canteen	Price Preparation time	Accessibility
Omnivore	Several times a week	Canteen	Taste Nutritional values Price Orig	Limited choice in the canteen
Omnivore	Several times a week	Canteen	Taste Preparation time Sustainability	Preparation time Limited choice in the
Omnivore	Several times a week	Canteen	Origin Sustainability	Taste Lack of culinary knowledge
Omnivore	Several times a week	Canteen	Price Sustainability Origin Taste	Lack of culinary knowledge Accessibil

do you say you have a good idea of how to cook:	is a source of protein in the canteen or cafeteria?	do you think you will consume more meat alternatives in	What would need to change for pulses to form a larger part of your diet?
Yes	No	No	I would like the university canteen to serve more legume dishes
Yes	Yes	Yes	Understanding the reasons for eating legumes would motivate me
No	No	Yes	Recipes that are easier to use would help me eat more legumes
No	Yes	Yes	The university canteen should increase legume-based offerings
Yes	Yes	Yes	
Yes	No	No	Are legumes actually less expensive than meat products?
No	Yes	Yes	Faster preparation would make me eat legumes more frequently
Yes	No	No	I would like additional explanations on why legumes are beneficial
No	No	No	There are too few legume dishes available at the canteen
Yes	No	Yes	Having access to simpler and quicker legume recipes would help
Yes	Yes	No	Increasing the frequency of legume dishes in the canteen would help
Yes	No	Yes	
Yes	No	No	Legumes should be simpler and quicker to prepare at home
No	Yes	No	The canteen should serve legume-based meals more often
Yes	Yes	Yes	More detailed information about health effects would be useful
No	Yes	No	I would consume more legumes if they were quicker to cook
No	No	No	I am interested in learning more about why legumes are good for health
No	No	Yes	If legumes helped reduce food expenses, I would eat them more often
Yes	Yes	Yes	The canteen menu should include legumes more often
No	Yes	Yes	I would like to see legumes appear more regularly in the canteen
Yes	Yes	No	Easy-to-follow legume recipes would encourage me
No	No	No	The canteen should diversify its legume-based meals
Yes	Yes	Yes	More choice of legume dishes would improve the canteen offer
Yes	Yes	Yes	More legume dishes at the university canteen would be welcome

The image shown here is only a screenshot of the survey results. By opening the link we shared earlier, you can access the full dataset with all 88 responses (one row per respondent).



5.2 CRM overview:

https://docs.google.com/spreadsheets/d/1_Qyh4ZP4cm_w5CZN_zfWU042DH3G4icq7YiFOuRKzBw/edit?usp=sharing

Here you can access the CRM we created. It is a useful document to use as a starting point to continue the work in the future: it **helps track outreach and responses**, and it can be expanded by adding other potential stakeholders.

ACTOR	ORGANISATION/ COMPANY	PHONE NUMBER	E-MAIL	How did we get the contact	Has responded	Relevance for developing the legume value chain
Renaud Boulec	Grand Paris Seine & Oise Urban Community	06 17 59 86 17	renaud.boulec@gpseo.fr	Margaux Grosjean	<input type="checkbox"/>	Key institutional actor in charge of agriculture at intermunicipal level, able to steer and support territorial agricultural policies in favour of legumes.
Christian Hubert	Huilerie de la Plaine de Versailles	06 22 41 55 03	christianhubert78@googlemail.com	Margaux Grosjean	<input type="checkbox"/>	Main legume actor in Seine Aval who has built a complete and well-structured value chain from production to processing and distribution, working with several other producers.
Adèle Maistre	Yvelines Department	06 60 22 81 77	amaistre@yvelines.fr	Margaux Grosjean	<input type="checkbox"/>	Department-level agricultural officer who can support and co-construct structuring territorial projects related to legumes.
Marion Demade	SUEZ	06 81 60 26 53	marion.demade@suez.com	Margaux Grosjean	<input type="checkbox"/>	Works on biodiversity and resource protection, closely linked to agroecology and the environmental benefits of legume crops.
Alain Defresne	Farm – Buchelay	06 03 02 97 05	a.defresne@orange.fr	Margaux Grosjean	<input checked="" type="checkbox"/>	Local lentil producer in Buchelay, part of the territorial production base and member of Christian Hubert's producer network.
Thierry Legris	Farm – Favrieux	06 87 36 19 25	legris.thierry@wanadoo.fr	Margaux Grosjean	<input type="checkbox"/>	Local lentil producer contributing to the territorial supply of legumes.
Maxime Moulin	Axereal cooperative		maxime.moulin@axereal.com	Margaux Grosjean	<input type="checkbox"/>	Representative of a major agricultural cooperative that could help structure collection and market outlets for legumes.
Ghislain Hedoux	SEVEPI cooperative – Hardricourt site		hardricourt@sevepi.fr	Margaux Grosjean	<input type="checkbox"/>	Manager of a cooperative site, key for logistics, storage and aggregation of legume production.
Denis Taillard	SEVEPI cooperative – Limay site		limay@sevepi.fr	Margaux Grosjean	<input type="checkbox"/>	Manager of a strategic cooperative site in Seine Aval, relevant for anchoring legume flows locally.
Jimmy Wadoux	SEVEPI cooperative – Hargeville site		hargeville@sevepi.fr	Margaux Grosjean	<input type="checkbox"/>	Local cooperative site manager facilitating territorial anchoring of the value chain.
EARL du Bois Regnault	EARL du Bois Regnault	01 64 94 91 74	co.go@free.fr	Internet	<input type="checkbox"/>	Diversified farm producing a wide range of legumes (lentils, chickpeas, peas, beans), with strong experience in legume cropping systems.
Ferme des Tourelles	Ferme des Tourelles			Internet	<input type="checkbox"/>	Regional farm that could potentially be mobilised to strengthen local legume production.
Emile et une graine	Emile et une graine			Internet	<input type="checkbox"/>	Farm engaged in diversified agriculture and short supply chains, aligned with local legume value chain development.
Coopérative Bio IDF	Organic Cooperative of Île-de-France	01 64 06 36 17	contact@coopbioidf.fr	Internet	<input type="checkbox"/>	Key regional cooperative for organic supply chains, relevant for structuring organic legume sourcing.
EARL de l'Évangile	EARL de l'Évangile			Internet	<input type="checkbox"/>	Farm located in southern Île-de-France that could contribute to regional legume production.
Court Circuit	Court Circuit	06 58 19 93 04	contact@votre-circuit-court.fr	Internet	<input type="checkbox"/>	Local distributor specialised in short supply chains, facilitating access of legume products to local markets.
Ferme des Hironnelles	Ferme des Hironnelles	06 07 98 13 65	lafermedeshironnelles@gmail.com	Internet	<input type="checkbox"/>	Farm involved in both production and processing of legumes (flours, oils, lentils, chickpeas), illustrating integrated value chains.
EARL Le Bois Racine	EARL Le Bois Racine	06 81 15 55 14	boisleracine91@gmail.com	Internet	<input type="checkbox"/>	Farm specialised in lentil production, strengthening the local supply base.
Elena Fourcroy	Regional Chamber of Agriculture Hauts-de-France	06 79 91 01 31	innovation@hautsdefrance.chambagri.fr	Internet	<input type="checkbox"/>	National reference on agricultural innovation, with experience in supporting legume-related projects.
Nicolas Latraye	Terres Inovia / FiLoLÉG project	01 30 79 95 00	n.latraye@terresinovia.fr	Internet	<input type="checkbox"/>	Expert coordinating a local grain legume value chain project, with strong methodological and technical expertise.
Anne Schneider	Terres Inovia	01 30 79 95 65	a.schneider@terresinovia.fr	Internet	<input type="checkbox"/>	Technical expert on legumes and cropping systems, relevant for agronomic support.
Adeline Scrève	Protéi'Sol	03 20 31 63 39		Internet	<input checked="" type="checkbox"/>	Involved in an innovative collective project on plant proteins, combining farmers, cooperatives and downstream actors.
Peggy Bouchez	Chambers of Agriculture Normandy / LEGGO	06 83 89 04 41	peggy.bouchez@normandie.chambagri.fr	Internet	<input type="checkbox"/>	Key resource for actions targeting collective catering and tools to structure legume value chains.
Marion Martin	Terres Univia	01 88 87 88 32		Internet	<input type="checkbox"/>	National-level actor working on communication and valorisation of grain legumes and plant proteins.
Laura Poyer	C'Midy	06 68 97 63 01	lpoyer@yvelines.fr	Internet	<input checked="" type="checkbox"/>	In charge of local sourcing for middle schools, including legumes, making her a key downstream actor for securing outlets.
Alix Mennella	Association Végétarienne de France		a.mennella@vegerarisme.fr	Merveilleuses légumineuses	<input checked="" type="checkbox"/>	Responsable du plaidoyer pour l'AVF

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