



Universidad de Valladolid



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Exploring the Agri-Food Cluster in Spain: Interactive workshop

Moldova Workshop and StC meeting

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OVERVIEW

Agenda Interactive Session: Brainstorming and Networking

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Overview of the Spanish Agri-Food Sector

This interactive workshop will present key information about the agri-food cluster in Spain, including its location, main products, economic importance and unique characteristics.

The aim is to encourage active participation, knowledge sharing and collaboration between the project partners. Along with the presentation, interactive activities will be shared to facilitate discussions, analysis of some case studies and brainstorming sessions aimed at fostering a deeper understanding of the agri-food cluster in Spain and potential avenues for collaboration between other European countries.



02



Introduction

Spanish agri-food sector

Spanish agri-food sector, one of the most important industrial sectors in the country. **It represents 10.1 % of the total EU agri-food sector.** This leading industry in Spain is also the **fourth largest contributor** to food and beverage production in the European Union.

The agrifood sector is made up of the primary sector and the agrifood industry **entirely composed of SMEs.** Of these agri-food companies, 96.5 % are small enterprises and 79.5 % are micro-enterprises. **The turnover of 126,354.1 M€**, representing **25.4 % of the manufacturing sector, 22.5 % of total employment and 20.6 % of added value.**



Overview of the Spanish Agri-Food Sector

FOOD INDUSTRY

This includes the production, processing, and manufacturing of various food products.

BEVERAGE INDUSTRY

This encompasses the production and manufacturing of different types of beverages, including alcoholic and non-alcoholic drinks.

TOBACCO INDUSTRY

This sub-sector covers the production and processing of tobacco products.



Introduction to agri-food clusters

AGRI-FOOD CLUSTERS: DEFINITION

Agri-food clusters are geographic concentrations of interconnected companies, organizations, and institutions that are involved in the production, processing, distribution, and marketing of agricultural and food products. According to the Food and Agriculture Organization of the United Nations (FAO), this approach supports innovation, globalization, internationalization, localization, and competitiveness of agro-based clusters.

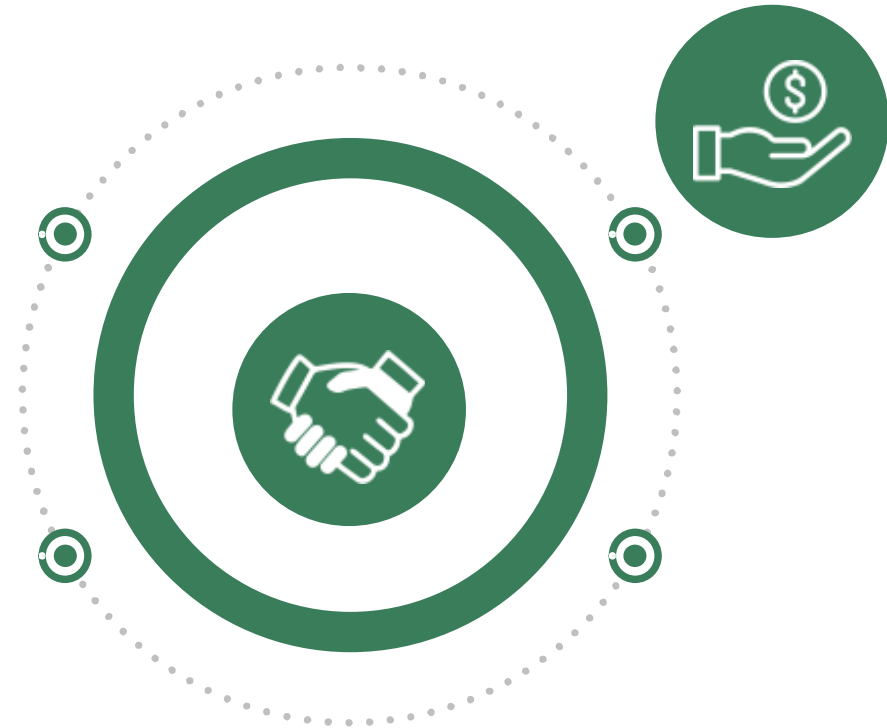
Importance of Clusters for Economic Development

Economic contribution and Employment Generation:

The agri-food cluster in Spain comprises 3,591 companies and employs 71,312 employees in the agri-food industry. The cluster represents approximately 25% of the employment and companies in the agri-food sector.

Export revenue:

Spain is a major player in the global market, being the leading exporter of fruit and vegetables and the world's top producer and exporter of olive oil. In 2021, exports reached nearly 14.7 million tons with a value exceeding €17.6 billion.



Importance of Clusters for Economic Development

Regional Development:

The clusters have contributed to the diversification of rural economies, reducing their dependence on traditional agriculture and promoting the development of related industries, such as food processing, packaging, and logistics.

Investment and innovation:

The close proximity and collaboration between companies and research institutions within this ecosystem - more than 30,000 companies involved in food processing, more than 50 specialised universities, more than 20 cutting-edge technology centres and 412 foodtech start-ups - are working together on innovation and technology transfer.





03

**Key
Components**

Geographic Concentration of Agri-Food Companies
Spain is divided into several regions, each with its own distinct geography, climate, and agricultural characteristics.

The clusters with the largest number of companies are located in Cataluña, Andalucía and Castilla y León. Clusters higher weight on the economy region of Cantabria and Madrid.

Here you can select a region from the map and directly explore cluster actors and sectoral statistical data for that region. [For more info, click here](#)



Some of the major regions include:

ANDALUSIA	CATALONIA	VALENCIA	CASTILLA AND LEON
<ul style="list-style-type: none">• Known for its olive oil production, with major clusters in Jaén and Córdoba.• Other important products include citrus fruits, wine, and vegetables.	<ul style="list-style-type: none">• Barcelona is a major hub for food processing and distribution.• The region is known for its high-quality seafood, wine, and traditional Catalan cuisine.	<ul style="list-style-type: none">• Known for its citrus fruits, especially oranges and lemons.• The region also produce rice, wine, and vegetables.	<ul style="list-style-type: none">• It's Spain's largest region, characterized by vast expanses of farmland and livestock.• The region is known for its production of cereals, pulses, meat (specially pork).

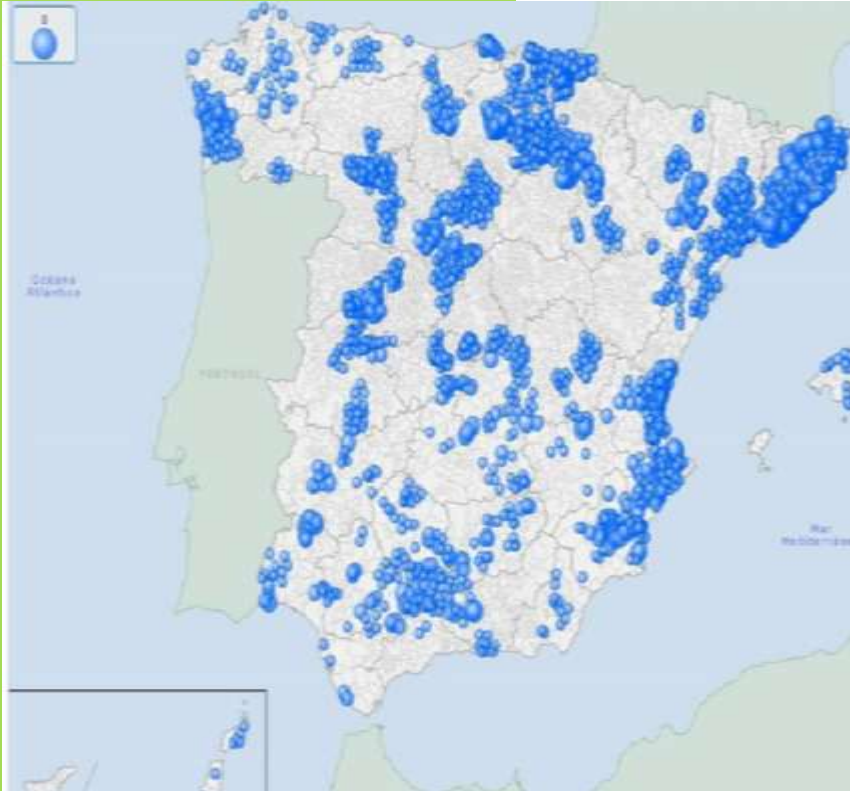
Some of the major regions include:

MURCIA	BASQUE COUNTRY	GALICIA
<ul style="list-style-type: none">• Known as the 'orchard of Europe' for its extensive production of fruits, and vegetables.• The region is a major exporter of lettuce, peppers and tomatoes.	<ul style="list-style-type: none">• Known for its hub for food processing and distribution.• The region is known for its high-quality seafood, wine, and traditional Basque cuisine.	<ul style="list-style-type: none">• The region is famous for its dairy products, such as cheese and butter.• Known for its variety of seafood especially octopus, mussels and scallops.

The concentration of clusters in the following Autonomous Communities

- Andalusia (20.7%)
- Catalonia (14,6%)
- Valencian Community (12.8%)
- Castilla-La Mancha (8.7%)
- Galicia (6.9%)
- Castilla and León (6.3%)
- Murcia (5.9%)
- Extremadura (5.2%)

These 8 regions concentrate 81.1% of the relevant clusters identified.



The spatial distribution of the relevant clusters at Autonomous Community-Autonomous Region levels (NUTS-2 Regions) shows a greater spatial concentration of clusters in the following Autonomous Communities

Key players in agri-food cluster in Spain

The key players in agri-food clusters in Spain include a diverse range of entities contributing to the sector's growth and development:



Agricultural Businesses: Around 945,000 agricultural businesses in Spain contribute significantly to the sector, accounting for 3.0% of the total Gross Value Added (GVA).



Food Processing Companies: With over 31,000 companies dedicated to food processing, this segment contributes 2.9% of the GVA in the agri-food sector.

Key players in agri-food cluster in Spain



Multinational Companies: Multinational enterprises play a crucial role within the agri-food cluster, comprising production and marketing companies that drive innovation and technology transfer within the sector.



Research Centers: Research centres and institutions are pivotal in fostering technological advancements and innovation within the agri-food industry, enhancing competitiveness and sustainability.

Key players in agri-food cluster in Spain



Startups: The vibrant startup ecosystem in Spain includes over 412 food-tech startups that contribute to innovation and technological advancements within the agri-food sector.

Key Players and Stakeholders



**catalonia
clusters**

ACCIÓ



**Generalitat
de Catalunya**



**clúster
de innovación
agroalimentaria**
COMUNITAT VALENCIANA



CLUSTER DE INNOVACIÓN AGROALIMENTARIA GRANADINO

**clúster
alimentario
de galicia**

Key Players and Stakeholders



Key Players and Stakeholders



cluster aragonés de
alimentación



04

**Cases studies:
Successful
Collaborations in
Spain**



VITARTIS association of the food industry in Castilla y León

This cluster is an eminently business-oriented group of the Food Industry of Castilla y León. This private entity works for the region, looking after the general interest, combining positions with the primary sector and the administration by encouraging innovation and improvement in all areas of the agri-food sector in the region.

A graphic element of the VITARTIS logo consisting of several red rectangular blocks of varying sizes and orientations, arranged in a stepped, staircase-like pattern.

VITARTIS

Asociación de la
Industria Alimentaria
Castilla y León

Success Stories of Agrifood Clusters in Spain

VITARTIS members has grown significantly, involving entities from different production subsectors (meat, dairy, cereals and derivatives, fruit and vegetables and other profiles such as processing industry, producer cooperatives, second-tier cooperatives).

VITARTIS members currently account for **40% of the turnover** and employment generated by the food industry in Castilla y León, which means, in absolute terms, more than **3,800 million euros of turnover** and more than **14,000 employees**. The investment in I+D+I of VITARTIS members reached **60.000.000 €** approximately 60% of this investment in the regional sector.



The Agri-Food Cluster of Navarre (NAGRIFOOD)

NAGRIFOOD is one of the leading European groups in the agri-food industry.

A non-profit organisation whose aim is to contribute to guaranteeing an increase in the competitiveness of agri-food companies in Navarre, and therefore that of the sector, through the development of inter-cooperation, open innovation and intra-entrepreneurship.

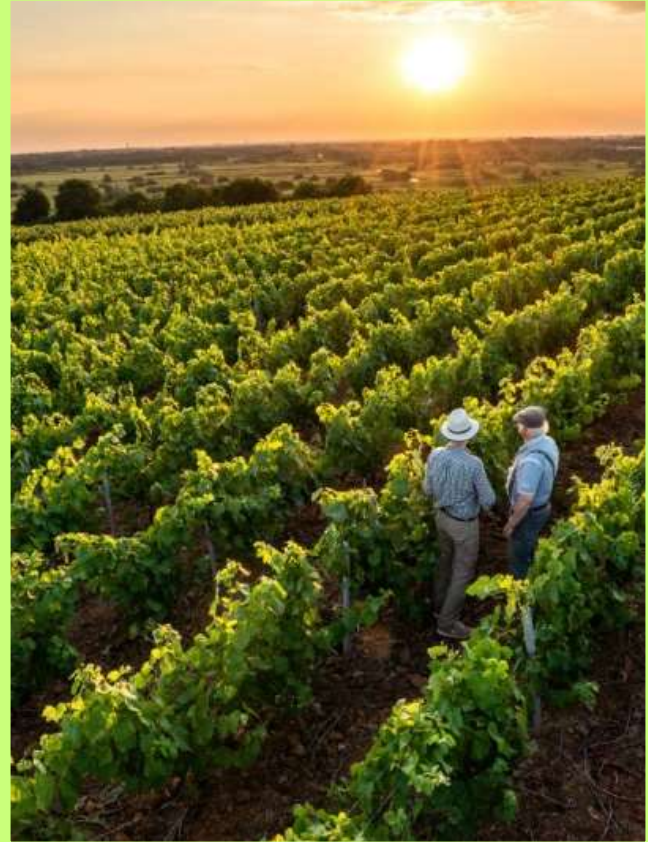
Success Stories of Agrifood Clusters in Spain:

The cluster plays a vital role in promoting and facilitating innovative processes developed by the industry to improve business and covers practically the entire value chain, with an annual **turnover at €3 billion**, and an additional **€900 million from the primary sector**.

The agri-food sector is the second largest industrial sector in terms of turnover, **accounting for 20% of production and a turnover of more than 2.5 billion euros**.

We are talking about an ecosystem of around **1,370 companies** and **24,000 farms**, employing around **25,000 people**.

Cluster strategies in Spain aim to improve the **competitiveness** of particular industries or sectors by encouraging **cooperation between companies, universities, and local government agencies.**



Example: Research Institution Collaboration with Agri-Food Companies

The Agri-Food Cluster of Catalonia (Clúster Alimentario de la Provincia de Barcelona) has partnered with research institutions like the Institute of Agrifood Research and Technology (IRTA) and the University of Barcelona.

These collaborations have led to the development of **innovative products, processes, and technologies in areas such as food safety, nutrition, and sustainable production methods.**

One notable success story is the collaboration between IRTA and the dairy company Danone, which resulted in the development of new fermented dairy products with improved nutritional properties and extended shelf life.



Example 2: Public-Private Partnership for Sustainable Agriculture

The Agri-Food Cluster of Navarra (Clúster Alimentario de Navarra) has established a public-private partnership with the Government of Navarra and local farmers to promote sustainable agriculture practices and reduce the environmental impact of agricultural activities.

This collaboration has led to the implementation of **precision agriculture techniques, water management strategies, and the adoption of renewable energy sources in agricultural operations.**

One successful project was the development of a mobile app that helps farmers optimize irrigation schedules and minimize water consumption, resulting in significant water savings and improved crop yields.



Example 3: International Collaborations and Trade Partnerships

The Agri-Food Cluster of Galicia (Clúster Alimentario de Galicia) has established partnerships with agri-food clusters and companies in other countries, such as Portugal and France, to **facilitate knowledge exchange, joint research projects, and trade opportunities.**



Other prominent stakeholders

RESEARCH CENTERS

- Valencian Institute of Agricultural Research (IVIA)
- Andalusian Institute of Agricultural and Fisheries Research and Training (IFAPA)
- Agrifood Research and Technology Institute (IRTA)

UNIVERSITIES

- Polytechnic University of Valencia
- University of Murcia
- University of Córdoba
- University of Lleida
- University of Valladolid

TRADE ASSOCIATIONS

- ASAJA (Agricultural Association of Young Farmers)
- COAG (Coordinator of Farmer and Livestock Breeders Organizations)
- FEPEX (Federation of Producers and Exporters of Fruits and Vegetables)

Interactive Activity - Sustainability Case Studies

- In groups, analyse some of the successful case studies presented and discuss possible applications or adaptations for your respective countries, regions or contexts.
- Provide examples of how supporting institutions, such as research centers, universities, and trade associations, play a key role in ensuring the sustainability of the agri-food cluster.

05

**Cluster
policy**



Clusters policies and initiatives

Its main objectives are to promote innovation, sustainability, and competitiveness in the food sector.

European Agricultural Funds: Spain is set to receive significant funding from the Common Agricultural Policy (CAP) for the period between 2021-2027, totalling €47.724 billion. This funding includes direct grants aimed at supporting sustainable practices within the agri-food sector.

The first approach is the policies or programmes specifically aimed at **promoting the growth and/or formation of clusters**, known as national and/or regional cluster policies.

The second approach is to promote **joint ventures between government agencies, businesses and research institutions**.

Clusters policies and initiatives

Funding: The government has long-term plans for economic development, such as the Internationalization Strategy of the Spanish Economy 2017–27, the 2030 Industrial Strategy, and the Strategy to Counter Demographic Challenges.

Public-Private Partnership: To support research, development and innovation (RDI) in the agri-food sector, the government encourages public-private cooperation. This collaboration is demonstrated through the Food for Life Spain platform, which is funded by the government to promote the sharing of scientific, technological and research advances.

Startups and businesses: Promotion of the Spanish Bioeconomy Strategy, which aims to maintain competitive food production while promoting the development of high-value added products and services in the food agriculture and forestry sectors.

06

**Future
outlook and
opportunities**



Interactive Session: Brainstorming and Networking

From the information and insights provided in the SWOT analysis identify the following potential growth and agri-food cluster development

- Predictions for the future of Agri-food clusters in Spain.
- Opportunities for growth, innovation, and collaboration.
- Environmental sustainability initiatives
- Importance of continuous support from stakeholders and policymakers

Wrap-up and Q&A

Summarize key takeaways from the workshop

Discuss potential follow-up actions or next steps

Gather feedback from participants on the workshop



Conclusion

- **Overview of the Industry:** The Agri-food industry in Spain is a significant contributor to the country's economy, providing employment opportunities and contributing to exports.
- **Key Clusters:** Spain has several key Agri-food clusters, including Catalonia, Andalusia, Valencia, and Murcia. These clusters specialize in different agricultural and food products.
- **Benefits and Challenges:** Agri-food clusters offer numerous benefits, such as knowledge sharing, innovation, and improved competitiveness. However, they also face challenges such as resource management, sustainability, and market fluctuations.

Conclusion

- **Success Stories:** Several success stories highlight the achievements of Agrifood clusters in Spain, such as the development of innovative products, international partnerships, and sustainable practices.
- **Future Outlook:** The future of Agrifood clusters in Spain looks promising, with opportunities for growth, innovation, and sustainability.

References

- Alarcón, S., & Sánchez, M. (2013). External and internal R&D, capital investment and business performance in the Spanish agri-food industry. *Journal of Agricultural Economics*, 64(3), 654–675. <https://doi.org/10.1111/1477-9552.12015>
- Calafat-Marzal, C., Sánchez-García, M., Martí, L., & Puertas, R. (2023). Agri-food 4.0: Drivers and links to innovation and eco-innovation. *Computers and Electronics in Agriculture*, 207, 107700. <https://doi.org/10.1016/J.COMPAG.2023.107700>
- European funding for 2024 in agri-food and bioeconomy - Innovarum*. (n.d.). Retrieved March 26, 2024, from <https://innovarum.es/en/funding-oportunitates/european-funding-for-2024-in-agri-food-and-bioeconomy/>
- García Morillo, J., Camacho Poyato, E., Manuel Díaz-Cabrera, J., Navid Sadjadi, E., & Fernández, R. (2023). *Challenges and Opportunities of Agriculture Digitalization in Spain. Challenges and Opportunities of Agriculture Digitalization in Spain*. <https://doi.org/10.3390/agronomy13010259>
- Simboli, A., Taddeo, R., & Morgante, A. (2015). The potential of Industrial Ecology in agri-food clusters (AFCs): A case study based on valorisation of auxiliary materials. *Ecological Economics*, 111, 65–75. <https://doi.org/10.1016/J.ECOLECON.2015.01.005>
- Suchowska-Kisielewicz, M., Sołowiej, P., Chun, H. S., Navarro-Del Aguila, I., & De Burgos-Jiménez, J. (2022). *Sustainable Innovation through Developing Hybrid Agri-Food Supply Chains: A Case in South-Eastern Spain*. <https://doi.org/10.3390/toxics10120752>
- The agri-food sector is growing in Spain*. (n.d.-a). Retrieved April 2, 2024, from <https://www.oftex.es/en/the-agri-food-sector-is-growing-in-spain/>
- The agri-food sector is growing in Spain*. (n.d.-b). Retrieved March 26, 2024, from <https://www.oftex.es/en/the-agri-food-sector-is-growing-in-spain/>



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THANKS!

DOES ANYONE HAVE ANY QUESTIONS?

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