



AGRIMA

Agri-food Waste Management for Sustainable bio-economy through Higher Education curricula and upskilling

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Summer Camp #2 & Barcamp - Report



Deliverable Factsheet

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Author(s)	Hendrikus Nouws, Letícia Gonçalves
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Abstract	This report provides information about the Summer Camp #2 & Barcamp held between July 6 and 10, 2026, in Porto, Portugal.
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Consortium

	Name	Short Name	Country
1	Instituto Politécnico do Porto (Coordinator)	IPP	Portugal
2	Panepistimio Aigaiou (University of the Aegean)	UA	Greece
3	Web2Learn	W2L	Greece
4	Université D'Aix Marseille	AMU	France
5	Univerzitet u Novom Sadu	UNS	Serbia
6	Associação de Viticultores do Concelho de Palmela	AVIPE	Portugal

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1. Introduction

The aim of the **AGRIMA** project is to foster higher education institutions' capacity building for the green transition through innovative practices and higher education curricula updating in agri-food waste management for the circular bioeconomy.

This report summarizes the activities of **AGRIMA's 2nd Summer Camp**, including a **Barcamp**, that was held between July 6 and 10, 2026, in Porto, Portugal, and co-hosted by IPP and AVIPE. The main objective of this event was for students to visit several (major) Portuguese companies, providing a first-hand opportunity to identify and assess the used waste valorisation techniques. During the Barcamp, the students demonstrated the knowledge acquired during the Summer Camp and had the chance to exchange ideas with agri-food industry stakeholders.

The technical visits to various companies in different industrial sectors had the main goal of understanding how these industries implement strategies for enhancing the value of waste and by-products, contributing to a circular economy and the sustainable use of resources. Despite belonging to different sectors, the companies showed that waste and by-products from the production process can serve as raw materials for other industrial processes, simultaneously reducing environmental impacts and creating economic value.



Figure 1. Poster of AGRIMA's 2nd Summer Camp.

PROGRAMME					 Funded by the European Union Erasmus+ Enriching lives, opening minds.	
Date	Time	Event type	Topic / Industry	Location		
July 6	14:00 - 17:30	Team building	Welcome / Introduction (Henri Nouws) Agri-food valorisation examples (Staff members) The Porto Protocol https://www.portoprotocol.com Icebreaker event (Sónia Nouws Maria João Raposo)	ISEP-IPP		
July 7	8:30 - 12:45	Visit	Levira Destilaria https://destilarialevira.com	São Lourenço do Bairro		
	12:45 - 17:00	Team building	Lunch / Museum / Boat trip / City tour / ...	Aveiro		
July 8	8:45 - 11:45	Visit	Super Bock Group https://www.superbock.pt Simplyeast https://simplyeast.pt/	Leça do Balio		
	11:45 - 13:00	Lunch		ISEP-IPP		
	13:00 - 17:00	Visit	Amorim Cork Solutions https://amorimcorksolutions.com/pt	Mozelos		
July 9	8:45 - 12:00	Visit	LIPOR https://www.lipor.pt/pt PreZero https://prezero.com/pt	Baguim do Monte		
	12:00 - 14:00	Lunch		ISEP-IPP		
	14:00 - 17:00	Teamwork	Preparation of the Barcamp	ISEP-IPP		
July 10	10:00 - 13:00	Barcamp	Student - Agri-food industry stakeholder discussions	ISEP-IPP		

Figure 2. Program of AGRIMA's 2nd Summer Camp.

2. Day 1, July 6, 2026 – Introduction | Team building

AGRIMA's 2nd Summer Camp started with a welcome session by the project's coordinator and was followed by presentations of a representative of each partner.



Figure 3. Photos taken during the welcome session and the partners' presentations.

The session continued with a presentation delivered by a representative of **The Porto Protocol**, which was founded by **Taylor's Port** and is a global movement empowering the wine industry with practical knowledge, solutions, and collaboration to tackle climate change and advance sustainability. The movement is built on the belief that sharing knowledge, experiences, and successes can drive systemic change and create a ripple effect across the industry and beyond. It brings together more than 250 members across 5 continents and 20 countries, representing the entire wine value chain. As an open platform for resources, innovation, and collaboration, like-minded organizations are connected and committed to build a global community of changemakers for a more sustainable future.



Figure 4. Photos taken during the presentation of The Porto Protocol.

In the final activity of the session, the **Icebreaker** event, the students were divided into teams composed of participants from different HEIs to enhance networking, teamwork and to share knowledge and skills. These teams were maintained during the entire Summer Camp to collaborate and prepare the Barcamp. Each team was assigned a food waste (onion peels, bread leftovers, peanut shells, potato peels, coffee grounds, or orange peels) and challenged to (“think like a green startup company”):

- identify potential problems related to the assigned waste and explore how it could be transformed into a product in a sustainable and innovative way;
- identify the users of the product;
- create a name for the product;
- present a pitch about the idea.



Figure 5. Photos taken during the teams’ pitch presentations.

3. Day 2: July 7, 2026 – Levira Distillery | Team building

The “**Destilaria Levira**” (Levira Distillery), located in São Lourenço do Bairro, is specialized in the production of wine spirits, pomace brandies, aged brandies, liqueurs, organic gins, and grape seed oil. One of the aspects that defines the company is the use of by-products from the Portuguese wine industry, namely grape pomace and wine, adopting a production model based on adding value to these materials. During the visit, it was possible to observe the main stages of the industrial process, from receiving the grape pomace, through distillation, drying, and separation of the different fractions obtained. The distillation allows for recovering high-quality alcohol, while the other components follow different paths for added value.

The company operates according to a closed-loop refinery system, aiming to maximize the use of all process streams. In addition, it has international certifications in quality (ISO 9001), food safety (FSSC 22000), sustainability (ISCC), and organic production, showing its commitment to high environmental and production standards.



Figure 6. Photos taken during the visit to Destilaria Levira - I.

One interesting example of value creation observed was the recovery of seeds present in grape pomace. After separation and drying, these are cold-pressed to produce grape seed oil, a natural product with high commercial value used in the food, cosmetic, and pharmaceutical industries. This process turns a winemaking by-product into a raw material with high added value.

The visit highlighted that Destilaria Levira can turn almost all fractions of grape pomace into useful products, making it an excellent example of circular bioeconomy applied to the wine industry.



Figure 7. Photos taken during the visit to Destilaria Levira - II.

On the way back to Porto a short stop was made in the city of **Aveiro** for team building and social activities.



Figure 8. Photos taken during the visit to Aveiro.

4. Day 3: July 8, 2026 – Super Bock Group | Simplyeast | Amorim Cork Solutions

The **Super Bock Group**, located in Leça do Balio, is the largest Portuguese beverage company, with extensive production of beer, mineral water, soft drinks, cider, wine, and malt, distributing its products to more than fifty countries. Beyond its industrial scale, the visit highlighted the company's strong commitment to innovation and the sustainable and circular use of resources.



Figure 9. Photos taken during the visit to the Super Bock Group.

The main stages of the brewing process, from mashing to filling, were presented, and the various by-products generated throughout production were identified. Among these, spent grains represent the largest fraction of the waste generated (approximately 85%). Rather than being discarded, this material is mainly valorised as animal feed, reducing waste and promoting nutrient reuse.



Figure 10. Group photo taken during the visit to the Super Bock Group.

The visit also included **Simplyeast**, a company dedicated to the valorisation of surplus yeast generated during beer fermentation. The wet yeast undergoes centrifugation, dehydration, and drying processes, resulting in ingredients with high nutritional value, primarily used in animal nutrition.

In addition to biomass valorisation, and because Simplyeast is located on the brewery's premises, this provides important environmental benefits by avoiding carbon dioxide emissions associated with the transportation and disposal of this by-product, thus fully integrating Simplyeast into the group's production chain.



Figure 11. Photos taken during the visit to Simplyeast - I.



Figure 12. Photos taken during the visit to Simplyeast - II.

Together, Super Bock and Simplyeast demonstrate how different by-products generated within the same industrial unit can be transformed into new value chains, reducing waste and increasing the overall efficiency of the production process.

Amorim Cork Solutions, located in Mozelos, is part of the **Corticeira Amorim Group**, the world leader in cork processing for more than 150 years. The company is an international benchmark in the valorisation of this natural resource, developing innovative solutions aimed at making full use of the raw material.

During the visit, it became clear that virtually all cork is utilised. Even defective pieces and residues generated during cutting and finishing operations are transformed into new materials such as granulates, agglomerates, and composites, which are subsequently used in a wide range of industrial applications. Applications of cork go far beyond wine stoppers, including thermal and acoustic insulation materials, flooring solutions, components for the automotive industry, construction, aerospace applications, and pharmaceutical products. Beyond the simple reuse of these residues, it was also demonstrated how cork can be combined with other materials to enhance mechanical, thermal, and acoustic properties, leading to the development of new products for various sectors.

The company also presented its international cork stopper collection and recycling programme, through which Corticeira Amorim has collected millions of used cork stoppers across several countries, reincorporating hundreds of tonnes of recycled cork into new industrial products. This strategy extends the material's life cycle and reduces the need for virgin raw materials.

The visit demonstrated that innovation and sustainability are fundamental pillars of the company, making Amorim Cork Solutions an outstanding example of excellence in the implementation of circular economy principles.



Figure 13. Photos taken during the visit to Amorim Cork Solutions.
(note: it wasn't allowed to take photos of the factory and production lines)

5. Day 4: July 9, 2026 – LIPOR | PreZero | Barcamp preparation

LIPOR – “Associação de Municípios para a Gestão Sustentável de Resíduos do Grande Porto” is the organisation responsible for the management, recovery, and treatment of municipal waste produced by several municipalities within the Porto Metropolitan Area. Its activities focus on reducing landfill disposal, valorising the organic fraction of waste, and promoting the circular economy through a variety of sustainable management solutions.

During the visit, participants had the opportunity to learn about the main feedstocks processed by LIPOR, particularly biowaste originating from food- and green waste, as well as multi-material waste collected from associated municipalities.



Figure 14. Photos taken during the visit to LIPOR & PreZero - I.

One of the most significant aspects observed was the composting process (operated by **PreZero**), through which organic waste is converted into 100% natural compost. Different types of fertilisers and organic soil amendments are produced and designed for various agricultural and gardening applications, including general-purpose fertilisers, products for fruit trees, vegetables, and formulations that promote root development or increase nutrient availability for plants.

In addition to organic waste valorisation, LIPOR develops environmental awareness initiatives, promotes the separate collection of food waste, and manages green spaces dedicated to environmental education, encouraging public participation in the transition towards a more sustainable economy.

The visit demonstrated that integrated municipal waste management goes far beyond waste disposal. Through nutrient recovery, natural fertiliser production, and the significant reduction of waste sent to landfill, it is possible to preserve natural resources and mitigate environmental impacts while advancing the principles of the circular economy.

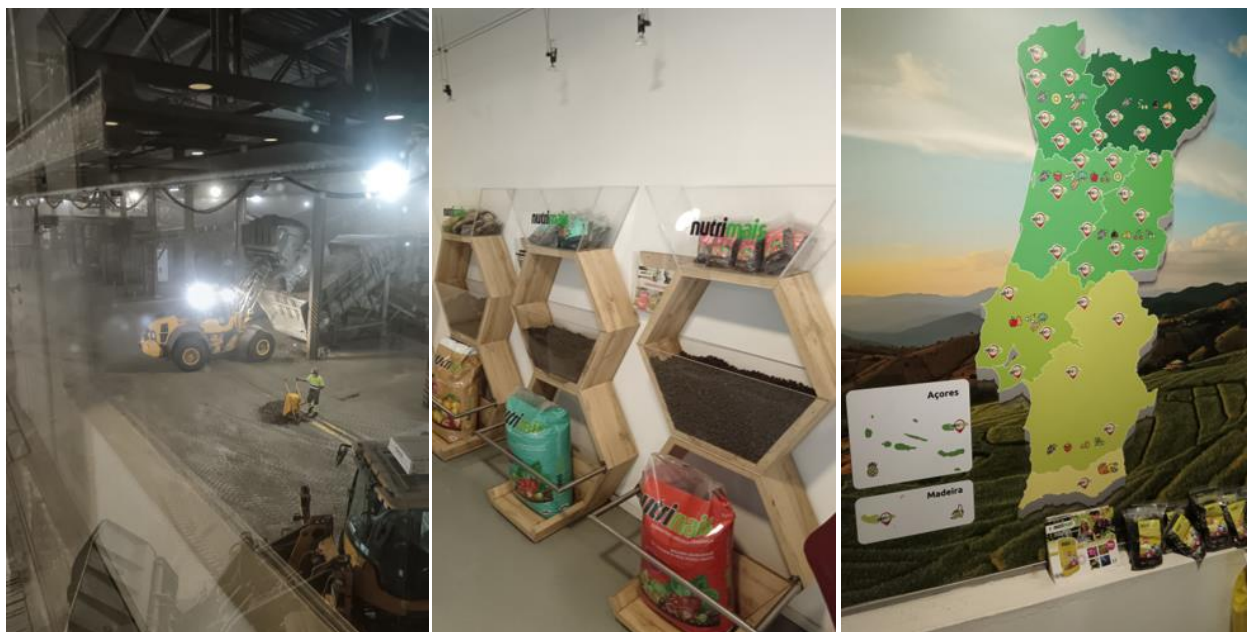


Figure 15. Photos taken during the visit to LIPOR & PreZero - II.

After the visits the student teams, as established on Day 1, were assigned a company that was visited during the Summer Camp, and prepared the **Barcamp**. At the end of this session a student presented several wines, produced in sustainable ways.



Figure 16. Photos taken during the preparation of the Barcamp.

6. Day 5: July 10, 2026 – Barcamp

The objective of the Barcamp was for the students to demonstrate the knowledge acquired during the Summer Camp and to exchange ideas with agri-food industry stakeholders. Each team explained the industry and the implemented waste valorisation processes of their assigned company and suggested possible improvements, alternatives and/or opportunities.



Figure 17. Photos taken during the Barcamp.

Some of the suggestions presented by the students were (*note: company names have been omitted to preserve confidentiality and comply with applicable disclosure restrictions*):

- New opportunities for added value were identified, including the conversion of residual solid waste into organic fertilisers and the reuse of treated hot water through heat recovery systems or for agricultural irrigation.
- Additional opportunities include the production of extracts rich in amino acids and nucleotides, the development of proteins for human consumption, the reuse of water recovered during centrifugation for irrigation, and the application of biomass as an agricultural fertiliser.
- Further improvements were also identified, such as the implementation of innovative composting techniques adapted to urban environments, the use of beneficial microorganisms capable of fixing nitrogen during composting, the valorisation of olive pits for biofuel production, and the reuse of filtered water generated during composting operations.

These suggestions could further strengthen the concept of a sustainable production cycle and demonstrate the potential to increase the overall circularity of the processes.