AFTER LIFE COMMUNICATION PLAN

Comprehensive Use of the Whey Generated by the Dairy Industry in the Basque Country

VALORLACT

LIFE11 ENV/ES/639/VALORLACT

http://valorlact.eu/

PROJECT OBJECTIVES

The main objective of the VALORLACT Project is demonstrate and validate a methodology that enables the whey transformation into added value products and energy, contributing to the reduction of the environmental impact of the cheese producers and improving at the same time the sector´s competitiveness.

The specific objectives of the VALORLACT project are:

1. **Demonstrate a methodology for the collecting and/or processing of cheese whey** that enables the feasibility of processes, equipment or infrastructures for its use as raw material in human food and animal feedstuffs or biofuel production (biogas)

2. Complete an **inventory and diagnostic** of the whey generation and management to get a detailed idea about the extent of the problem and the real possibilities for valorization options implementation.

3. **Validate the whey valorization technologies** through the installation and running of 2 pilot plants for whey concentration and biogas production, in a cheese facility.

4. **Obtain several food and feedstuffs prototypes for human and animal consumption,** which could be successfully marketed.

5. **Develop an Action Plan that enables at least a valorization rate of the generated whey above 80%** including all the legislative, technical, administrative, environmental and economic aspects for the correct handle storage, and processing of the whey.

6. **Reach a consensus for the validation of the proposed Action Plan** through the development of a collecting demonstration test as well as through the holding of several Contrast Roundtables with the involved sectors and organisms.

7. **Establish a Road Map for the effective implementation of** some of the proposed alternatives included in **the Action Plan.**

OBTAINED RESULTS

The main results of the Project are:

Demonstration of joint production of Whey Protein Concentrate (WPC-35) and Biogas on a pilot plant located at the VASCOLAC cheese factory in Zamudio (Bizkaia, Spain).

The pilot plant has been in operation for 48 months optimising the combined process of obtaining concentrates from Reverse Osmosis (RO) and Ultrafiltration (UF) as well as producing biogas from whey and UF permeate.

Development of 4 new whey-based food products, with concentrated liquid whey contents ranging between 21 and 62%.

These food products are:

- a whey drink with orange juice content aimed at children;
- a sliceable cheese type of product for sandwiches or ham & cheese fritters;
- cheese-flavoured sauce for salads and meat dishes;
- a soluble cocoa powder for vending machines or wholesalers.

These food products have been validated for consumption through consumer tests and nutritional and hygienic analysis. The shelf life has been also estimated.

Development of 9 types of fodder for livestock feeds and feeding tests with egg-laying hens, broiler chicken and dairy sheep.

The results indicate that whey addition to feedstuffs improves the yield across all the parameters analyzed: laying rate, daily intake, conversion index and daily weight gain.

Action Plan including several recovery proposals for whey use as well as financial and environmental viability studies of the main scenarios.

The whey collection proposals put forward enable the recovery of up to 90% of the whey produced in the Autonomous Basque Community (CAPV) and include the collection of some 53% of the whey generated by the small and medium-sized cheese factories to a centralized plant, separately or in combination with part of the Cantabria whey.

Possible collection routes, frequency and the number of cheese factories to be included per route have been proposed for each option.

Improved proposal for livestock feeding with liquid whey (including sheep), under hygienically controlled conditions (pasteurized).

Different proposals have been made regarding intake amounts recommended by type of livestock, both in the event of own livestock feeding (especially recommended for small size cheese factories) and for the delivery of whey for external livestock.

COMMUNICATION STRATEGY

The objectives of the communication strategy carried out during the whole Project are:

- **Communicate the results and objectives of the project** to the scientific and specialized community as well as to the dairy and other industrial sector´s companies (feed, waste treatment, livestock, administration…).

- **Involve these sectors in the valorization plan development** and their future implementation through the presentation and consensus of the proposed actions.

- **Raise public awareness** about the importance of the waste and by-products valorization and the necessity for improvement actions development.

- **Networking establishment with other organisms** for the interchange of information and further promotion of new initiatives in order to continue with the implementation of innovative technologies or new knowledge generation on waste valorization.

The main developed actions carried out for communication of the Project results are:

Project Web page
Web page in 3 languages (Euskera, English and Spanish) with information of the main advances and new of the project. Possibility of downloading information and diffusion material.

http://valorlact.eu/

Publications
2 Articles in technical magazines (Industrias Lácteas Españolas y Ganadería)

Diffusion material

- 5 Posters presented in 3 International Congresses.
- 1 On site panel, for the public information in the technologies demonstration pilot plant.
- 2 leaflets, initial and final.
- Layman report in 3 languages
- 1 video, available in You-tube and the Project Web page.
- 3 TV programs at local and national level

- 2 Press Releases with high impact in digital mass media.
- 7 radio interviews in local media.
- Action Plan summary sent to 63 stakeholders.
- Results presentation sent to 58 agents of the Collaboration Network.

Congress and Workshops attendance

Oral presentations in 6 International Congresses and 3 National Events

Collaboration Networking

Networking with around 150 organisms and companies was established in order to interchange information about related projects or initiatives, as well as to boost possible joint collaboration actions.

Meetings and Roundtable holding with stakeholders

- 2 Roundtables with Experts from the Basque Country for Action Plan consensus and Project results validation.
- 1 Meeting with Cantabria´s cheese makers Association for results presentation.
- 7 meetings with organisms and companies and attendance to other 7 events for networking and information gathering.

Other Communication Actions

- Sending of a survey to 120 cheese producers.
- Visits to 13 cheese makers and collaboration with 7 facilities for demonstration actions (pilot plant and whey collection).

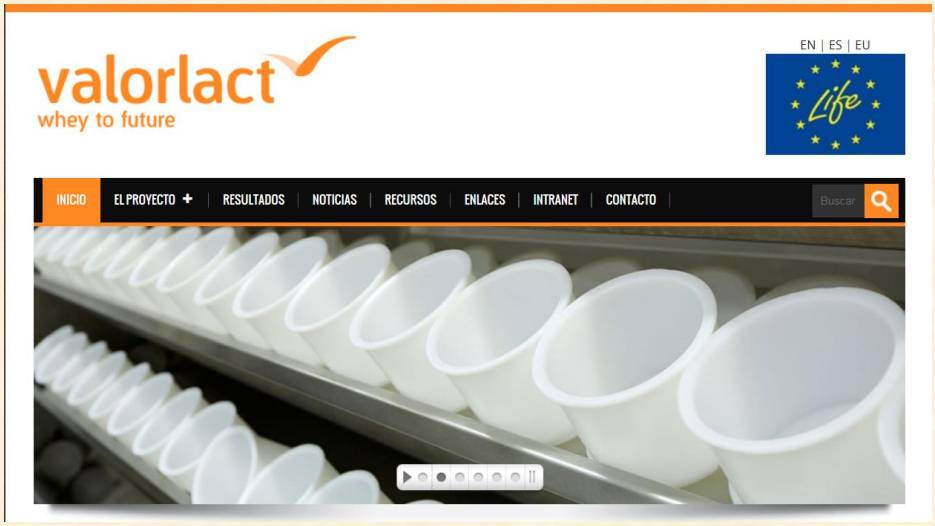
AFTER-LIFE COMMUNICATION PLAN

To disseminate the project results in the next years the following communication actions have been defined:

Maintenance and updating of the project WEB page

The website will be updated until 2020, with the publication of dissemination actions, new contacts and projects, etc.

Also, through the web public will be informed of the progress of the Action Plan and the Roadmap implementation and all possible actions arising from the project results.

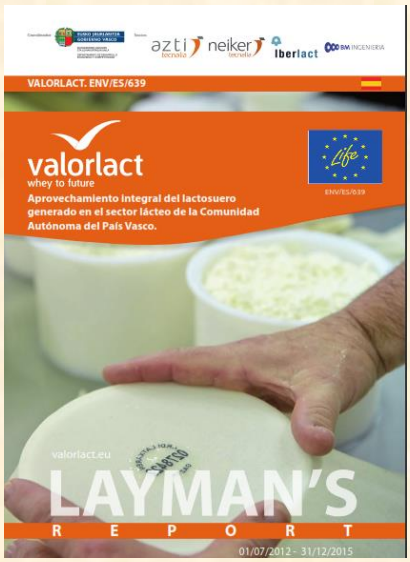


Divulgation material diffusion

Layman´s report and final leaflet of the project

These reports contains a summary of the results of the project and the proposed Action Plan, drafted to reach the general public in a less technical and more familiar language.

They has been written in 3 languages (Basque, Spanish and English) to reach the target audience, cheese sector professionals, food and feed manufacturing companies, waste management companies, public entities, etc.



The diffusion will be carried out through several channels, as attendance to national and international conferences or delivery to collaborative network and to new contacts that have been selected for transferring results (dairies, food businesses, feed ...). Specifically, they will also be sent to cheese makers associations at European level, to disseminate the results and promote reproducibility of the proposals for whey recovery in other regions.

Also, it will be published on the project website to be accessible by any user interested in it. Paper versions will be available in the work places of the participants and will be spread in the events or workshops to be attended.

Meetings with stakeholders involved in the Road Map implementation

Among the foreseen activities after the Project completion, are:

Continuation with the joint activities with the Cheese makers Associations from the Basque Country and Cantabria

As a consequence of the hold meetings with this sector, it is expected to establish new activities for the implementation of joint initiatives and interchange of information to evaluate the feasibility of common collection proposal or reproducing options in the Cantabria region.

Meetings with individual makers to transfer the food and feed developed products will be also carried out.

Meetings with Feed Manufacturers Associations and Waste Collectors or Managers

Project partners, will meet with representatives of these sectors to exchange opinions on the LIFE-VALORLACT proposals and industrial knowledge related to whey management and its possible use as raw material in the production of feed for animal feed.

This meeting will facilitate the future implementation of any of the actions defined in the Action Plan.

Attendance to Events and results presentation in Congresses

The foreseen activities for 2016 are:

Participation in the International Cheese Festival

The International Cheese Awards, attended by cheese makers from more than 30 countries, which will take place in mid-November in Donostia (Gipuzkoa), will conduct a series of seminars related to cheese sector in the Basque Country.

In these days, the results and the whey management Roadmap for the autonomous community developed in the project will be presented.

Participation in the international conference ORBIT 2016

Results and final conclusions will be presented in an oral communication in the ORBIT conference, focusing on circular economy and organic waste, which will be held between 25 and 28 May in Heraklion, Crete (Greece).

It is also expected a participation in other National or International events for the following years.

Articles publication

At least 2 new articles will be published in technical magazines:

Article in Tecnifood journal
This article will describe the developments and whey based food prototypes made in the project. Tecnifood is a specialized journal in development of new products and technologies. Article accepted for publication

Article in Industriambiente journal
The article will describe the possibilities of energy recovery and how to manage the collection and reuse of whey. Industriambiente is specialized journal in the environmental sector, waste management, renewable energy, minimization, recycling, etc. Article accepted for publication.

Mass media diffusion

Press release
At the end of the LIFE-VALORLACT project, a press release has been published for the dissemination of results and roadmap.

It is expected to be a way to reach various media such as press and radio-TV.

ESTIMATED BUDGET

The foreseen Budget for the proposed communication actions is:

ACTION	BUDGET (€)
WEB maintenance and updating	1.500
Dissemination of Divulgation material	800
Meetings with Stakeholders	600
Attendance to Events and results presentation	2.500
Articles publication	5.000
Mass media diffusion	600
TOTAL	**11.000**

Financing of the foreseen communication activities will be performed through the inclusion of the actions in other projects to be carried out by the participants (Specific agreements with Administration) as well as through the application of new aids at local or national level to existing programs (Rural Developments Programs or similar).