



غرفة صناعة الأردن
Jordan Chamber of Industry

الرقم: NO. ٤٩/٤/١

التاريخ: Date ٤.٥.٢٠٢٠/١/١٠

عناية رئيس مجلس الإدارة / المدير العام المحترم ،،

تحية طيبة وبعد،،،

يسرنا دعوتكم الى المشاركة في الندوة الافتراضية وذلك حول هدر المواد في قطاع انتاج الالبان في لبنان وذلك ضمن اعمال مشروع SwitchMed II - MED TEST II التي تهدف الى نشر النتائج الرئيسية لأنشطة تـمـيـن شـرـش اللبـن في شركات الالبان اللبنانية للتشجيع بشكل أكبر في التقليل إلى أدنى حد من فقدان المنتجات الثانوية ذات القيمة الغذائية العالية والآثار البيئية ذات الصلة في لبنان ، والذي سيتم عقده في تاريخ 17 يناير من الساعة الحادية عشرة وربع صباحاً الى الساعة الرابعة مساءً .

من ابرز اهداف و محاور الندوة :

- 1- زيادة الوعي بين الصناعيين وأصحاب المصلحة حول اهمية الاستفادة من مصـل اللبـن
- 2- زيادة قدرة شركات الالبان على استكشاف خيارات الاستفادة من مصـل اللبـن مع التخفيض اللاحق في بصمتهم البيئية
- 3- تقديم النتائج النهائية للمصانع المشاركة في المشروع

حيث تعتبر الندوة فرصة للاستفادة من خبرات و تجارب المصانع التي شاركت في المشروع وبحث امكانية عكسها في المنتجات المحلية مما سيسهم في تقليل نسبة الفاقد في عمليات انتاج الالبان وستعقد الورشة وجاهيا في لبنان بالإضافة للمشاركة الافتراضية لكل من الاردن و فلسطين و مصر .

رابط المشاركة في الندوة :

<https://unido-org.zoom.us/meeting/register/tZAKcO-vqD4jHdFfu0Y9042TXQyYnf5vQglC>

مرفق :

-العرض التوضيحي للندوة .

شاكرين لكم تعاونكم

وتفضلوا بقبول فائق التحية والاحترام ،،،

المهندس فتحي الجغبير

رئيس مجلس إدارة غرفة صناعة الأردن



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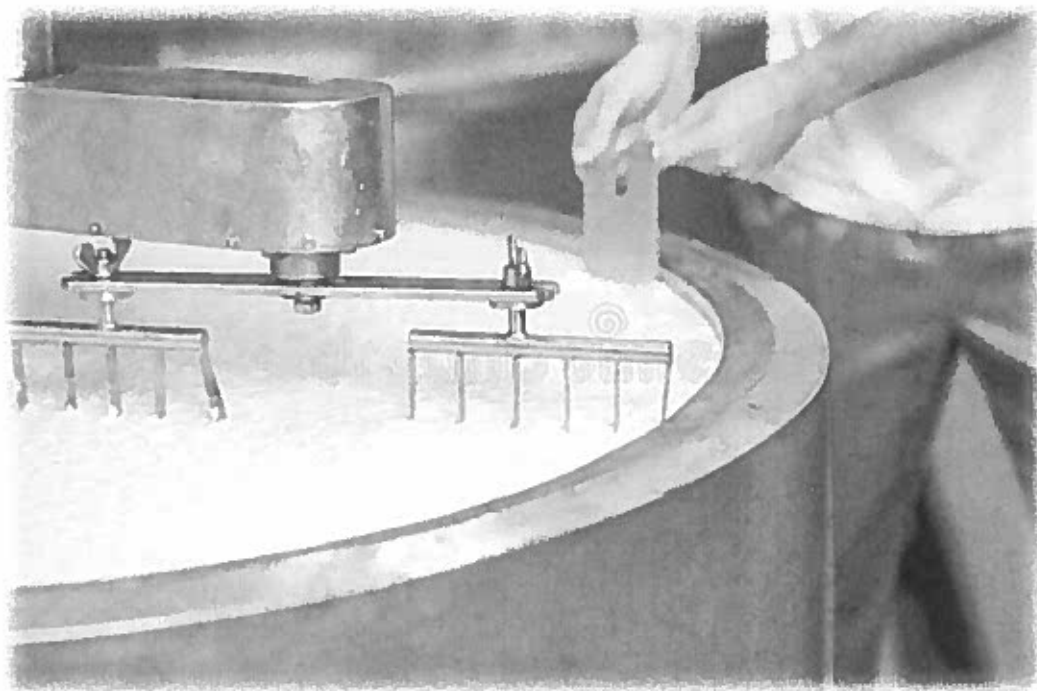


MED TEST III - Whey valorization in Lebanon

From a troublesome “waste” in dairy production to valuable nutritious and affordable foods

Results Dissemination Seminar

Concept Note and Draft Agenda



Date: 17 of January 2023

Time: 10:15 – 15.00, Beirut time

Venue: Grand Kadri Hotel, Zahleh, Central Bekaa

SwitchMed II - UNIDO
www.switchmed.eu



1. Background

Whey is the main by-product obtained by the dairy industry. About 220,000 tonnes of whey are generated each year in Lebanon. Despite its richness in valuable compounds, a small fraction of whey is used for the production of whey cheeses (double cream), while the major part is dumped in rivers and sewage leading to environmental problems. Amidst the economic and social crisis faced by Lebanon, the dairy sector was identified as an important contributor to keep food security, as dairy products represent a basic good in the daily food consumption of Lebanese families. For this reason and considering the great potential to improve resource efficiency and circular practices of this sector, the SwitchMed II/MEDTEST III project, in collaboration with the Ministry of Industry (MoI) and supported by the Association of Lebanese Industrialists (ALI), opted for an initiative to study the potential of adding value to the whey, which is currently dumped to water bodies or used for low value applications in some farms. This practice generates loss of economic and nutritional value and high environmental risks.

The project is working with 2 pilot companies, Skaff Dairy and Liban Lait, which have actively participated to analyze products formulation and conduct trials and piloting of selected whey-based products in order to demonstrate the technical feasibility of developing industrial applications. Considering the predominance of SMEs in this sector and the current **economic crisis that limits high investments**, priority was given to whey valorization options with optimized costs implementation for SMEs such as liquid or semi-liquid whey-based formulations.

The technical team with the pilot companies have identified 4 products to be developed from/with whey, namely fruit juices, spreadable cheese, ayran-type drink, and probiotics, out of which 3 have been successfully developed at pilot scale. For each product, several formulations have been developed at laboratory scale and subject to a sensory analysis for evaluation. The formulations produced at a pilot scale in the demonstration companies were subject to a large scale sensory analysis campaign involving **more than 100 panelists** from different regions and age groups. The formulations that met the sensory acceptability criteria at pilot industrial scale have high probabilities of being introduced in the national or regional market. With this stage of product development, time is appropriate to share the above findings with dairy sector stakeholders to motivate and enable further actions toward a higher valorization of whey in Lebanon.

2. Objective

The result dissemination seminar is aimed at sharing the key findings of the whey valorization activities promoted by the SwitchMed II – MED TEST III in Lebanese dairy companies to encourage further engagement of relevant stakeholders in the development of viable alternatives for the use of whey, minimizing the loss of a high nutritional by-product and related environmental impacts in Lebanon.

3. Target Audience

From Lebanon:

- Representatives of relevant ministries and public administrations: Ministry of Industry, Ministry of Environment, Ministry of Economy and Trade, Ministry of Agriculture, Litani River Authority, Lebanese Standards Institution (LIBNOR)
- Industrial sector: Syndicate of Dairy companies in Lebanon, interested Lebanese dairy companies; Association of the Lebanese Industrialists, Syndicate of Lebanese Food Industrialists, Association of Bekaa industrialists; Chambers of Commerce, Industry and Agriculture.
- Academia, business incubators and accelerators
- Relevant complementary development projects/programs



From the neighboring Arab Countries

- Relevant dairy sector stakeholders from the SwitchMed MED TEST III Projects in Egypt, Jordan and Palestine

4. Modality

The seminar will be organized as **in-person activity** for Lebanese participants on January 17th, 2022, as per the agenda figuring in section 7 below.

- **Venue: Grand Kadri Hotel.**
- **Address: Boulevard Brazil street, Zahleh, central Bekaa.**

Lebanese participants are invited to confirm their participation by contacting the following phone numbers: **+961 70 202 797; +961 3 736 967**, or by email to: n.sabra@unido.org / cordobasandoval@unido.org

The seminar will be conducted in a hybrid mode to enable the attendance of participants from Egypt, Jordan and Palestine.

- **Connection data (for online participants):** Participants that will attend the meeting online, please click on the registration link below and fill in the zoom form. You will receive the link to access the meeting immediately after completing registration.

<https://unido-org.zoom.us/meeting/register/tZAkcO-vqD4jHdFfu0Y9042TXQyYnf5vQqtC>

The seminar will be held in English. Simultaneous interpretation to Arabic will be available for all participants.

For more information, call: +961 70 20 27 97; +961-3 73 69 67, or email to: n.sabra@unido.org / g.cordobasandoval@unido.org

5. Expected Results

- Awareness is created among industrialists and stakeholders about appropriate whey valorization approaches at both international and local levels.
- Lebanese dairy companies have increased capacity to explore whey valorization options with subsequent reduction in their environmental footprint.
- Whey based products developed by the project are directly tasted and assessed by attending Lebanese industrialists and stakeholders, resulting in a potential increase in their acceptability of these products.
- Networking between the project and relevant attending stakeholders, increasing the chances of potential collaborations
- Attending academic institutions have increased interest to conduct research on whey valorization

Besides presenting the key finding of the whey valorization activities, the seminar will be an opportunity to see and taste the whey based products that have been developed by the project.





6. About the lead specialists



PhD. Ali Ismail is a Lebanese food specialist professional who received his diploma in agro food engineering in 1993 from the University of Lille 1, and his M.S. (1994) and PhD (1998) in Biotechnology and Food Industry from the National Polytechnic Institute of Lorraine. He joined the Faculty of Sciences of the Lebanese University in 2000, then the Faculty of Agronomy in 2003. His teaching responsibilities include “food processing”, “food sciences”, and “quality management”. He has worked as a technical advisor in several food industries in Lebanon for more than 20 years and has been part of the specialist team of consultants of the SwitchMed – MED TEST initiative since 2017, supporting food companies in the optimization of their processes, use of materials and other resources. Since September 2014, Ali Ismail has been a Professor at the Faculty of Agronomy of the Lebanese University.

M.Sc. Chris Arvanitakis is an international specialist in food technology, with special focus on dairy and juice industrial processing. Owner of a Mechanical Engineer Degree, high education in food technology and engineering, complemented with a MBA from USA (Duke) and Switzerland (IMD) in General Management. He has served for over 35 years in senior posts within multinational companies of Tetra Pak and Alfa Laval (Tetra Laval Group). During his tenure these companies, he led numerous innovative projects for improving existing products, but also launching new ones within national and multinational dairy and beverage industries, and also optimizing food Industries for better utilization of resources.



About SwitchMed II

SwitchMed II is regional program financed by the European Commission (EC), through the Directorate General for Neighborhood and Enlargement Negotiations (DG NEAR) with an overall objective of stimulating the creation of new greater business opportunities and decent employment while reducing the environmental footprint of consumption and production activities. UNIDO is the lead agency coordinating the Action and implements the program in partnership with the United Nations Environment Program (UNEP), Economy Division, and Med-Waves, the United Nations Environment Programme Mediterranean Action Plan (UNEP/MAP) regional activity centre for Sustainable Consumption and Production (formerly known as SCP/RAC). Moreover, UNIDO implements activities as part of the direct support to the private sector through the MED TEST III subcomponent on the promotion of a greener and circular industry. The SwitchMed II - MEDTEST III project is contributing to creating capacities to incorporate RECP practices in Lebanese industries.



7. Agenda

17 of January 2023

Time	Activity
10:15 – 10:30	Registration of participants
10:30 – 11:00	<p>Welcome and opening remarks</p> <ul style="list-style-type: none"> • Mr. Selim Zeenni, President of the Association of the Lebanese Industrialists (tbc) • Ms. Roberta De Palma, CTA, SwitchMed MED TEST III project (online) • Mr. Emmanuel Kalenzi, UNIDO Regional Representative (tbc) • Ms. Lea Polony, Attachée- Program Manager, Private Sector Development, EU Delegation to Lebanon. • Mr. George Bouchikian, Minister of Industry <p><i>Moderator: Ms. Nada Sabra, National Coordinator</i></p>
11:00 - 11:10	<p>Whey valorization approach of the SwitchMed - MED TEST III project <i>Ms. Nada Sabra</i> <i>National Coordinator</i></p>
11:10 – 11:30	<p>International experience in whey valorization and recommendations for Lebanon <i>Mr. Chris Arvanitakis.</i> <i>International Specialist in Food Technology</i></p>
11:30 – 11:50	<p>Whey generation in Lebanon and development methodology of proposed whey-based products <i>Mr. Ali Ismail</i> <i>National Food Specialist</i></p>
11:50 – 12:05	Coffee Break
12:05 – 13:00	<p>Results and Profile of developed whey-based products: formulation requirements, physic-chemical and organoleptic properties. <i>Mr. Ali Ismail</i> <i>National Food Specialist</i></p>
13:00 – 13:20	<p>Technological and investment needs and experience on the economic feasibility of the developed whey-based products <i>Mr. Chris Arvanitakis</i> <i>International Specialist in Food Technology</i></p>
13:20 - 13:40	Discussion
13:40 – 13:50	<p>Conclusions and way forward <i>Ms. Chantal Akl</i> <i>SwitchMed MED TEST III Focal Point, Ministry of Industry</i></p>
13:50 – 15:00	Lunch and testing of products