D7.10 – Second set of Practice Abstracts

WP7- Dissemination, communication, exploitation and training

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65	P01-INRAE	Public (PU)

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement n°101000723

Project information

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Project Coordinator:	Institut National de Recherche pour l'Agriculture, l'alimentation et l'environnement (INRAE)
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History of changes

Author	Date	Comments	Release
Geneviève Gésan-Guiziou, INRAE	01/07/2024	Initial draft	**V0.1**
Katherine Flynn, IFA	30/07/2024	Review of 15 PAs	**V0.2**
Ana Ramalho, IFA	21/08/2024	Review of 14 PAs	**V0.3**
Geneviève Gesan-Guiziou, INRAE	29/08/2024	Final approval and submission to the E.C	**V1.0**
Geneviève Gesan-Guiziou, INRAE	16/01/2025	Addition of new PAs - Final approval and submission to the E.C	**V2.0**

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1 Executive Summary

This deliverable presents 28 of the FAIRCHAIN's Practice Abstracts (PAs) prepared between M18 and M46 of the project (May 2022 to December 2024).

In FAIRCHAIN, we committed to deliver a total of 50 PAs: 27 PAs were released in month 18 (deliverable 7.9) and 29 new PAs are hereby released in month 46 (deliverable 7.10).

This second set of 29 PAs is covering all important dimensions of the FAIRCHAIN project, including some consideration about the intermediate value chains (2 PAs), the project's methodological aspects (i.e. Life Cycle Assessment, existing business models) (15 PAs), and a specific focus on the societal, technological and organizational innovations developed in the project (12 PAs in total).

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List of Acronyms

Abbreviation / acronym	Description
EIP-Agri	European Innovation Partnership for Agricultural Productivity and Sustainability
PA	Practice Abstracts
SoMe	Social Media
SFS Innovation platform.	Sustainable Food System Innovation Platform

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2 Introduction

Practice Abstracts (PA) are a form of dissemination of project results which encourages:

- practitioners to contact project partners who have generated innovative and useable results
- presentation of results in a short, concise, interesting, and easily understandable way.

The European Innovation Partnership-Agricultural Productivity and Sustainability (EIP-AGRI) developed the PA format which all Horizon 2020 projects must use to give research results visibility not only among peers but also to a wider audience (i.e. food producers and innovators, administrators, policy-makers, local authorities in food).

In FAIRCHAIN, the following boards/partners are involved in the preparation of the Practice Abstracts:

- **P01-INRAE**, in charge of coordinating the process of PA preparation (listing, sending reminders, answering questions, uploading on the EIP-Agri Website).
- **The Executive Board** (i.e. FAIRCHAIN WP leaders) is tasked with the identification of potential interesting topics for new PAs, during WP meetings. Interesting topics are then discussed, at project-level during the monthly Executive Board.
- The **editorial team**, composed of **P01-INRAE and P17-IFA**, provides editorial support to FAIRCHAIN partners. P01-INRAE and P17-IFA have prepared PA guidelines and perform a quality control of the PAs, to make sure partners are meeting the PA guidelines, particularly to be short, concise and written in an easy-to-understand language geared towards a particular target audience. The guidelines are attached in Annexes.

From May 2022 to August 2024 (i.e. Period 2 + part of Period 3) FAIRCHAIN has released a total of 28 PAs, which are listed in Chapter 3 of this deliverable. The PAs (in English version) are provided in Annex. The total number of PAs prepared for the project by August 2024 is therefore 56 (for the 50 PAs promised).

Once finalised, the PAs are uploaded on the EPI-Agri website by P01-INRAE: https://ec.europa.eu/eip/agriculture/en/find-connect/projects/innovative-technological-organisational-and-social.

The PAs are also widely disseminated via other channels, such as the FAIRCHAIN SoMe (X, LinkedIn…), downloadable from the FAIRCHAIN website and the Sustainable Food System (SFS) Innovation platform (sustainablefoodplatform.eu), which ambitions to become "the place to go to find information on innovative food systems".

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3 FAIRCHAIN Practice Abstracts

PA #	WP	CS	Practice Abstracts Title	Partners
PA28	WP3	CS-SWI	Potential use of apple draff vinegar as seed treatment	P21-IG
PA29	WP3	CS-SWI	Potential use of apple stillage vinegar to improve young apple tree growth	P21-IG
PA30	WP6	N/A	How to estimate the potential for European replication of contextual case studies?	P11-DSS+
PA31	WP5	CS-BEL	Why and how to estimate the potential environmental benefits of an innovation at an early stage?	P01-INRAE & P04-UGENT
PA32	WP3	CS-FRA	Reusable drinks packaging	P09-PETREL
PA33	WP2	CS-BEL	Peracetic acid vapor disinfection for packaging in the food Industry	P04-UGENT
PA34	WP2	CS-GRE	Blockchain traceability for Feta cheese	P12-SYNELIXIS
PA35	WP3	CS-SWI/CS-FRA	Vinegar and whey : how to use them for plant protection	P06-ACTIA (ITAB, Third Party)
PA36	WP3	CS-FRA	Features of a label suitable for reuse	P09-PETREL
PA37	WP3	CS-AUT	Food Innovation Incubator	P03-JOANNEUM
PA38	WP6	N/A	Policy evaluation affecting Intermediate Value Chains	P04-UGENT
PA39	WP5	N/A	The Rapid Scaling Tool	P04-UGENT

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PA #	WP	CS	Practice Abstracts Title	Partners
PA40	WP2/WP3	CS-SWE	Consumer preference for traceable Feta cheese using blockchain	P04-UGENT, P12-SYNELIXIS & P16-STYMFALIA
PA41	WP3	N/A	Food value chain canvas to identify the potential for sustainable innovation in value chains	P03-JOANNEUM
PA42	WP8	N/A	Cross fertilization activities	P08-CONFAGRICOLTURA
PA43	WP3	CS-AUT	Open Lab Day	P03-JOANNEUM
PA44	WP2/WP3	CS-SWE	Berry Count - a user-friendly ICT tool for efficient forest berry collection and improved stakeholder collaboration	P02- RISE
PA45	WP5	N/A	Industry Stakeholders' Guide: Using Multi-Criteria Analysis for Sustainable Decision-Making	P02- RISE
PA46	WP5	N/A	Sustainability Assessors' Guide: Implementing Multi-Critera Analysis in Sustainability Evaluations	P02- RISE
PA47	WP5	N/A	Strategic Sustainability Guide: Extending Impact Beyond the Project Life	P02- RISE
PA48	WP4	N/A	B2B market assessment	P06-ACTIA (ACTALIA, Third Party)
PA49	WP4	N/A	Business Model Generation workshop	P11-DSS+
PA50	WP7/WP8	N/A	A space for sustainable food information	P17-IFA
PA51	WP4	CS-BEL	Choosing the Right Crowdfunding Strategy for Farmers	P18-MoF

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PA #	WP	CS	Practice Abstracts Title	Partners
PA52	WP1	N/A	Intermediate food value chains offer win-win situations for farmers, consumers and regions	P05-Fraunhofer & P01-INRAE
PA53	WP1	N/A	Why and how to scale up your short food supply chain?	P05-Fraunhofer & P01-INRAE
PA54	WP3	N/A	Life Cycle oriented origin analysis	P03-JOANNEUM
PA 55	WP5	N/A	Easy life Cycle inventory with Means-InOut	P01-INRAE
PA 56	WP8	N/A	How to collaborate with European Projects	P08-CONFAGRICOLTURA

Table 1: List of FAIRCHAIN Practice Abstracts submitted from May 2022 to August 2024

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4 Conclusion

From May 2022 to August 2024, 29 PAs were prepared: some describe the social, organisational, and technological innovations (12) developed under the FAIRCHAIN Case Studies (CS-SWI: 3; CS FRA: 2; CS BEL: 2; CS-SWE: 2; CS-AUT: 2; CS-GRE: 1); others include some consideration about the intermediate value chains (2 PAs), or cover some transversal aspects such as: the policy evaluation and business models methodology (5); how sustainability can be assessed for a given innovations or value chains (7); or transversal topics such as the cross-fertilisation, communication and Dissemination activities in a H2020-funded project (3).

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Annex : Presentation of the second set of PAs

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement n°101000723

PRACTICE ABSTRACT No: 28

Potential use of apple draff vinegar as seed treatment

Replacing synthetic pesticide as well as finding alternatives to energy-intensive steam or hot water treatments are key to ensure a reduction in the impact of seed treatment and to meet consumer demand for pesticide-free food.

Vinegar, a basic substance defined in Regulation EC 1107/2009 on Plant Protection Products (PPP), can be used to treat wheat against pathogens without impacting germination rate. In organic agriculture, chemical treatments are lacking. To circumvent this, vinegar soaking was tested with aromatic plants (e.g. lemon balm, sage, thyme) as well as vegetables (e.g. carrots, beets, celeries).

Seeds were soaked in pure apple draff vinegar with 5% acidity (i.e. total organic acids) for 30 minutes and left to dry at room temperature without rinsing. This combination of vinegar concentration and soaking duration did not negatively affect germination rates. Soaking beetroot seeds in vinegar had a stimulating effect on germination. The seeds of aromatic plants were not sufficiently infected: it was not possible to determine whether soaking in vinegar had antifungal effects. No antifungal effect was observed on carrot seeds infected with *Alternaria sp.*. However, vinegar soaking had antifungal effect on beet seeds infected with *C. beticola*. Knowledge about the effect of this fungus on beetroot seeds germination rate is scarce. Nevertheless, vinegar soaking showed a fungicidal effect on beetroot seeds.

These results make apple draff vinegar a promising agent for treating beetroot seeds in particular. Additional experiments with naturally infected seeds and other vegetable seeds must take place to prove the fungicide effect of vinegar soaking and extend its application to other crops.

Recommendation: for beetroot seeds, soak in pure apple draff vinegar containing with 5% acidity (i.e. total organic acids) for 30 minutes and left to dry at room temperature without rinsing.

Benefits: stimulating effect on germination and fungicidal effect on beetroot seeds.

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End Users
Farmer & Cooperative

Country
Switzerland

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement n°101000723

PRACTICE ABSTRACT No: 28

Links for additional information

FairchainEU
FAIRCHAIN_EU
www.fairchain-h2020.eu

All Practice Abstracts prepared by FAIRCHAIN can be found here!

ABOUT FAIRCHAIN

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FAIRCHAIN PARTNERS

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LICENCE

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PRACTICE ABSTRACT No: 29

Potential use of apple stillage vinegar to improve young apple tree growth

The application of 200ml of draff vinegar produced by Cogiterre directly at the base of young trees shows positive effects on tree growth. Those effects differ depending on the pluviometry, the soil type and the apple variety. Better growth of the young trees during the season, and faster leaf production with increased photosynthesis, were observed after vinegar addition.

The apple draff vinegar is produced with an acidity of approximatively 6,4% and is then diluted with water to get a lower concentration. An acidity from 2,5% is sufficient to produce the biostimulation tendency. The latter is similar to the effects produced by an undiluted vinegar with an acidity of 5%. This acidity is the standard acid concentration of table vinegar.

The effect of vinegar has only been seen in some sites, which is probably caused by the differences in the soil type. A soil with a high quantity of limestone can especially profit from an addition of organic acids, which are particularly present in vinegar.

The identification of key biostimulating substances requires additional experiments and should help define optimal application conditions.

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End Users

Farmer & Cooperative, Industry & Retail, consumer

Country

Name or Worldwide

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement n°101000723

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PRACTICE ABSTRACT No: 30

How to estimate the potential for European replication of contextual case studies?

Context - The FAIRCHAIN project focuses on developing Intermediate Value Chains (IVC) for more sustainable food systems. Designing sustainable regional business concepts to operationalize these IVC is a challenge as it involves many actors and knowledge from multiple domains. A systemic approach was developed and applied to the FAIRCHAIN case studies (see Practice Abstract on Business Model Generation workshop), allowing the development of the most suitable regional business concepts to ensure long term sustainability in real context .

What – Estimation of the potential for European replication of the contextual case studies developed in the frame of the FAIRCHAIN project.

How - A step-by-step approach was applied to each regional business concept to identify its critical success factors and estimate its potential for European replication at a macro level. The methodology relies on the following steps:

- Identification and description of the key success factors and challenges for the regional business concept developed in the context of each FAIRCHAIN case study: this is done by means of an iterative process involving the key case study actors and regional stakeholders in different workshops (Cocreation, Business Model Generation and policy-oriented workshops).
- Estimation of the extent to which these respective regional business concepts could be deployed in Europe: this is done by means of a targeted documentary search considering the main characteristics and relevance of each regional business concept (i.e. applicable products or processes), leading to high-level mapping based on selection criteria (i.e. economic potential, framework conditions).

Why/ Relevance - The methodology made it possible to go beyond the context of each FAIRCHAIN case study and derive recommendations to facilitate the replication of such models in Europe. This approach makes it possible to examine the extent to which the themes addressed by the FAIRCHAIN case studies can contribute to strengthening or developing Intermediate Value Chain in targeted areas in Europe, assuming that the success factors are exploited.

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Country
Worldwide

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement n°101000723

PRACTICE ABSTRACT No: 30

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LICENCE

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PRACTICE ABSTRACT No: 31

Why and how to estimate the potential environmental benefits of an innovation at an early stage?

Any innovation aiming to bring environmental benefits to value chains (VCs) can only be reasonably considered after a comparison with existing value chains. It is essential to prioritize the value chains to be targeted and, if necessary, refine the innovation itself to improve its impact on the targeted VCs.

To implement such an approach, several steps must be considered:

1. **Choose an innovation that is likely to reduce environmental impacts.** In the FAIRCHAIN project, the implementation of a small packaging machine (technical innovation) could help reduce environmental impacts by (1) consuming less energy and water than existing processes and (2) using alternative packaging (e.g., bio-based materials).
2. **Define the targeted VCs and the key partners**. In FAIRCHAIN, the technical innovation mentioned was implemented in two value chains: one involving a small farm producing apples, apple juice, and applesauce (small-scale), and another involving an international food company processing mainly vegetables combined in recipes with animal-based ingredients, such as in sauces (large-scale).
3. **Model the systems** associated with the targeted VC using the methodological framework of Life Cycle Assessment (LCA), applying a cradle-to-grave approach, i.e., from raw materials to the use of the product by the consumer, including packaging.
4. **Collect data to assess the environmental impacts of the VCs.**
5. **Assess the environmental impacts** using appropriate methods defined by the LCA methodological framework.
6. **Analyze the results and quantify the potential** of the innovation to reduce environmental impacts.
7. **Propose ways to amplify the potentials.**

This methodology was applied to the two value chains mentioned, showing contrasting results. For the small-scale scenario, processing contributes significantly to environmental impacts, namely due to the use of glass packaging in the existing value chain, indicating a strong potential for improvement through innovation. In the large-scale scenario, most of the environmental impacts come from the use of raw materials, especially animal-based ingredients. In this case, the potential of the innovation has yet to be confirmed. **These examples from the FAIRCHAIN project illustrate the importance of addressing environmental assumptions at the early stages of the innovation process and show how the estimation of environmental benefits can be evaluated in practice.**

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End Users

Industry & Retail

Small producers

Country

Belgium

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement n°101000723

PRACTICE ABSTRACT No: 31

Links for additional information

HTTPS://WWW.FAIRCHAIN-H2020.EU/CASE-STUDIES/BELGIUM/

FairchainEU
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PRACTICE ABSTRACT No: 32

Reusable drinks packaging

Reusable drinks packaging reduces the need for single-use packaging by using containers that can be used several times. It requires the implementation of reuse loops that include bottle washing.

As part of the FAIRCHAIN project, drinks prepared from whey were offered in reusable bottles and a regional organisation was set up in Bourgogne Franche-Comté to provide, recover, wash and reuse the bottles.

How

To implement this approach, we recommend that players get in touch with the Réseau Vrac & Réemploi (www.reseauvracetreemploi.org) to identify the suitable partners. In the Bourgogne-Franche-Comté region, "J'aime mes bouteilles / Alliance 7" was involved in proposing the right glass packaging and corks, identifying bottling machines for advising on the characteristics of labels (format, glue) and defining the players in the reuse loop (circuit).

We recommend a deposit price (deposit paid by the consumer and returned when they return the bottle) of €0.5 for this type of reusable packaging.

Why

According to a 2023 IPSOS study, 92% of French people want the return of the glass bottle deposit.

In addition, the AGEC law in France (Anti-Waste for a Circular Economy) requires manufacturers to reuse 6% of packaging by2024 and 10% by 2027.

Finally, funding can be obtained from eco-organizations such as Citeo.

Relevance

To end single-use packaging, it is very relevant to implement the reuse of drink packaging and deposit systems, especially on regional scale with a positive environmental impact.

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End Users
Local drink producers

Country
Bourgogne Franche Comté - France

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PRACTICE ABSTRACT No: 32

Links for additional information

WWW.PETREL.FR

WWW.LACONSIGNEPOURREEMPLOI.FR

https://jaimemesbouteilles.fr

FairchainEU

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PRACTICE ABSTRACT No: 33

Peracetic acid vapor disinfection for packaging in the food Industry

In the FAIRCHAIN project, a sampling campaign among small and large-scale producers of (semi) liquid food, revealed alarming levels of microbial contamination in pre-stacked recyclable packaging materials. The microbial presence detected, peaking at up to 2 log CFU/100 cm^2 in mesophilic bacteria, highlighted the necessity of implementing sterilization methodologies. In response to this concern, a promising solution emerged: the application of peracetic acid (PAA) vapor for disinfection purposes. This approach not only ensures the quality and integrity of food products but also addresses environmental concerns by minimizing the usage of water and chemical residues. Two practical solutions are possible for this purpose:

1. A low flow rate fine nozzle can be integrated into the disinfection unit to disperse PAA into the food contact surface of the packaging material (pouch and spout). For more details on the type of nozzle, contact: Scaldopack (https://www.scaldopack.be)

2. An alternative disinfection nozzle developed by Tekceleo can also be used independently and can potentially be integrated into a packaging machine. Further information is available at: https://www.tekceleo.com/automated-decontamination.

For farmers and small-scale producers, adopting this cutting-edge technology offers a practical and cost-effective solution for enhancing productivity and ensuring product quality. By adopting advanced sterilization methods, they can mitigate the risks of economic losses associated with spoilage, comply with stringent food safety standards, and meet consumer demand for high-quality products. Ultimately, this enables them to maintain market competitiveness within the dynamic landscape of the food industry while promoting sustainable practices.

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End Users
Farmer & Cooperative

Equipment providers

Country
Worldwide

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement n°101000723

PRACTICE ABSTRACT No: 33

Links for additional information

FairchainEU
FAIRCHAIN_EU
www.fairchain-h2020.eu

More details on the type of nozzle contact: Scaldopack (https://www.scaldopack.be)

https://www.tekceleo.com/automated-decontamination.

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PRACTICE ABSTRACT No: 34

Blockchain traceability for Feta cheese

FAIRCHAIN blockchain-based traceability platform for Greek Protected Designation of Origin (PDO) Feta cheese has been developed and it is in pilot phase. The platform monitors collection of the raw materials (milk), cheese production processes, and final product packaging. Quantitative data (pH and temperature, time duration, lab analysis results) are registered in the blockchain through monitoring of relevant processes, without inflicting disruptive changes.

Through blockchain we have achieved:

- Immutability as data registration is permanent,
- Decentralisation of platform,
- Controlled level of transparency among the stakeholders and the consumers.

The combination of public and private chains overcomes the challenge of handling large and/or dynamically changing volumes of data in the blockchain. By design, the data-intensive transactions are performed in the private chain (based on Quorum), using the public infrastructure (Ethereum) for registering the Merkle roots to allow public access anchoring the private to the public chain.

This anchoring strategy

- Optimises the utilisation of blockchain resources
- Enhances transaction speed and
- Limits the number of transactions that involve costs.

In addition to memory rationalisation, efficient data coding techniques are employed. The risk of faulty data input at the edge of the infrastructure is mitigated through a verification mechanism involving supply chain actors, with potentially different interests.

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End Users

Consumer, Technology provider

Country

Greece

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement n°101000723

PRACTICE ABSTRACT No: 34

Links for additional information

FAIRCHAIN (HTTPS://WWW.FAIRCHAIN-H2020.EU/)

SYNELIXIS (WWW.SYNELIXIS.COM)

STYMFALIA (HTTPS://STYMFALIA-SA.GR/)

FairchainEU

FAIRCHAIN_EU

www.fairhain-h2020.eu

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LICENCE

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PRACTICE ABSTRACT No: 35

Vinegar and whey : how to use them for plant protection

Basic substances are one of the categories of active substances defined in the Plant Protection Products (PPP) Regulation EC 1107/2009. They can be useful to replace synthetic pesticides, and address the growing request from consumers for fruits and vegetables with no or a reduced amount of pesticide residues.

Among them, vinegar and whey, which fulfil the criteria of a foodstuff, have been approved for some uses in agriculture.

Considering vinegar, it has to contain a maximum of 10% of acetic acid. It can be used as fungicide and bactericide for seed treatment of various crops on the farm. For vegetable crops (carrot, tomato, bell pepper, cabbage), vinegar can be used pure. For cereals (wheat, spelt, barley), it needs to be diluted as follows, just before application : 1 liter of vinegar in 1 liter of cold water to disinfect a quintal of seeds. No need to rinse. Vinegar can also be used as a disinfectant for mechanical cutting tools.

Considering whey, uses as fungicide and virucide are approved. Whey solution can be applied to plants only in the growth stages before flowering, and leaves from treated plants can't be used for human consumption. In practice, whey can be used as a foliar spray for cucumber, zucchinis, grapevine and tomatoes, against powdery mildews and tomato yellow leaf curl virus. It has to be diluted as follows : 0,6 to 3 liters of whey per 100 liters of water (except for grapevine : 6 to 30 liters of whey per 100 liters of water). Finally, whey can be used as a disinfectant against viruses for gloves and mechanical cutting tools : dipping in a whey solution (5 liters of whey per 100 liters of water). This solution cannot be employed for treating gloves during or right before harvest.

Available and operational in all EU, vinegar and whey are perfect tools to provide to small-scale producers as known, easy-to-use, less dangerous, and environmentally more respectful Plant Protection Products. Their use is in line with the restriction on the application of chemical PPPs and the principles of European Green Deal.

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Country

Europe

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PRACTICE ABSTRACT No: 35

Links for additional information

http://substances.itab.asso.fr/fiches-substances-de-base

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ABOUT FAIRCHAIN

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LICENCE

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PRACTICE ABSTRACT No: 36

Features of a label suitable for reuse

To change from a single-use bottle to a reusable one, labeling is a crucial point. The industrial washing process involves immersing the bottle in a hot soda bath for around 15 minutes. To ensure residue-free and streak-free peel-off, you need to adapt your labels. Solutions exist for "cold glue" and self-adhesive labeling systems. All alternative techniques (wallpaper paste, milk, starch, ...) should be avoided.

The various criteria to be respected when producing a washable label:
use water-soluble glue
use "open" paper
minimize label size
avoid finishes that may block penetration of the welded solution, such as solid colors, varnishes, gilding, etc.

Given the growing demand for this type of label, and the simpler design criteria, these modifications should not generate any additional costs.
For the time being, "cold glue" labeling is still the most efficient in terms of washing performance, and involves fewer constraints in terms of the above-mentioned criteria.
Manufacturers of paper/glue laminates for self-adhesive labels are working to develop new solutions.
Re-use operators and printers are valuable allies in helping you make the right choices.

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End Users

Producers and bottlers

Country

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PRACTICE ABSTRACT No: 37

Food Innovation Incubator

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The Food Innovation Incubator (FII) aims to initiate support and organize the development of sustainable innovations within the local and international agri-food system by using tailor-made scientific methods to co-create practical solutions for real world problems. This allows to interact/cooperate with stakeholders of the agri-food sectors and helps them solve problems and challenges during the creation of sustainable solutions. The incubator clients can connect and exchange with each other, learn about existing solutions in the food system or co- create own sustainable products, services and processes in the intermediate food value chain.

The FII has three pillars called modules:

- **Innovation coaching**: product ideas become first prototypes, in a series of workshops, farmers cooperate with scientists and others to fine tune ideas.
- **Networking:** this connects stakeholders from food and other sectors to address new trends and developments.
- **Knowledge transfer**. Scientists and practitioners prepare concepts for workshops and trainings that are easily accessible to farmers.

To set up a FII, it is important to understand needs from local food stakeholders. This information can be collected through a series of workshops that focus on goals and planned activities. Preparing and running a FII will take approximately one full-time equivalent and this task is meant for university faculty. A FII can help to decrease barriers for farmers to engage with applied sciences therefore improving their farming activities through science-driven approaches.

End Users
Farmer & Cooperative,
Industry & Retail,
Technology provider

Country
Austria

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PRACTICE ABSTRACT No: 38

Policy evaluation affecting Intermediate Value Chains

To conduct a comprehensive analysis of how regional, national, and EU policy conditions influence the implementation of innovations in Intermediate Value Chains (IVCs), it is essential to follow a structured approach. Understanding these factors is crucial for stakeholders like business leaders and policymakers who are keen on nurturing regions that thrive economically while being environmentally conscious.

The FAIRCHAIN project employed a practical, step-by-step approach to uncover how different policies impact implementation of innovations in IVCs:

1) Gather feedback during the early stages of the innovation process through simple policy templates, mapping out drivers and hurdles along th way.
2) Set-up an in-depth examination based on the policy assessment framework focussing on practical implications of existing institutional, financial, infrastructural and cultural policy conditions through continuous dialogues with the case studies and their stakeholders.
3) Organize a policy workshop to focus on replicability, bringing together the different innovations from different regions. This implements knowledge exchange across borders and institutional bodies.

By following this step-by-step approach, researchers can effectively assess the influence of policy conditions on innovation implementation in IVCs. The goal is to provide actionable insights that support SMEs in thriving economically while being environmentally conscious.

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PRACTICE ABSTRACT No: 39

The Rapid Scaling Tool

The Rapid Scaling Tool, RST is designed to help producers and agri-food businesses effectively manage the scaling of agricultural innovations. By aligning your scaling efforts with environmental, economic, and social sustainability goals, the RST ensures that your business not only grows but thrives responsibly.

The tool includes:

- A structured scaling process: Guides users from defining to refining scaling ambitions based on sustainability indicators.
- Stakeholder Engagement: Emphasizes early and continuous collaboration to gather diverse insights and community support.
- Sustainability Alignment: Incorporates SDGs to ensure that scaling activities contribute constructively to sustainability targets, while offering monitoring using targeted agir-food indicators

Using the RST is easily done by following a 3-step plan set out in a logical spreadsheet. An additional userguide helps you to make sure everything is understood.

The RST can enhance your market efficiency, sustainability, and social impact, giving your business a competitive edge. It aligns your operations with global sustainability standards, which can be a strong selling point to external stakeholders, policymakers, and investors. This alignment not only mitigates risks but also opens up new opportunities in the agri-food sector.

By adopting the RST, you gain a hands-on roadmap for your innovation, helping you communicate effectively with stakeholders and navigate the complexities of scaling sustainably. This tool is an asset for ensuring that your business grows responsibly and successfully in today's competitive market.

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LICENCE

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PRACTICE ABSTRACT No: 40

Consumer preference for traceable Feta cheese using blockchain

Why

To successfully promote the adoption of blockchain (BC)-based traceability systems, it is essential to demonstrate their economic value for food producers. A compelling way to do this is to highlight consumers' willingness-to-pay of for products with traceable attributes, as in the case of blockchain-based traceable Feta cheese.

What?

A consumer study was conducted as an online survey in Greece, to assess how much consumers are willing to pay for BC-traceable Feta cheese and to determine the most effective ways of communicating traceability information. Respondents participated in a choice experiment, selecting between Feta cheese products with different packaging features, including Protected Designation of Origin labels, blockchain labels, QR codes, and price variations. The survey also collected demographic and consumption data to identify key consumer segments interested in BC-based traceability.

Learnings/ Relevance:

The study concluded that Greek consumers are willing to pay a premium for BC-traceable Feta cheese, suggesting a positive economic incentive for food producers to adopt such systems. Additionally, identifying consumer segments allows for the development of tailored marketing strategies that can effectively communicate the value of traceable products.

It is important to conductconsumer research to substantiate the economic viability of new technologies and to refine marketing approaches that effectively communicate the benefits of BC-based traceable products to end consumers.

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PRACTICE ABSTRACT No: 41

Food value chain canvas to identify the potential for sustainable innovation in value chains

The food value chain canvas is a coaching tool to analyze the potential for sustainable innovation in an organization's value chain or product. It can be used in coaching settings with single clients or in a workshop with multiple clients. Before using the method, the coach/expert should have gained a basic understanding of the organization's value chain and why it needs to be changed. This can be achieved through a short interview.

How?

The method begins with visualizing the target value chain from cradle to cradle, for example on a whiteboard or a flip chart. The food value chain canvas then utilizes the value proposition and unique selling proposition as an entry point to depict the innovation potentials. The coach/expert guides their clients through this process by asking questions and helping them to better understand the need for change. Leading questions can be:

- What is the state of the value chain?
- What is the Unique Selling Proposition (USP) of the product, and is there a demand to change it?
- What values are created along the value chain, and are these values reflected in the qualities of the product?
- How can the value creation be altered towards sustainability goals?

Relevance:

The food value chain canvas focuses on both the organizational perspective, based on the business model blocks, and the value chain perspective. It can be extended through strategic stakeholder mapping, hotspot analysis, and creative approaches such as design thinking.

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PRACTICE ABSTRACT No: 42

Cross fertilization activities

The goal of cross fertilization activities in a European Project is to create and establish a new paradigm of collaboration, according to which the use of external collaborations and emulation with other similar projects allows a higher success rate of the project itself. Cross-fertilization activities in a European project depend on several key factors:

1. **Multidisciplinarity**: Projects benefit from having collaborators with diverse backgrounds and expertise. Partners from different fields bring unique perspectives and contribute to innovative solutions.
2. **Knowledge base**: Partners with a broad knowledge base can generate new combinations and value-added practices. A strong base enables creative synthesis and cross-fertilization.
3. **Organizational diversity**: diverse partners, each with unique knowledge and skills, foster cross-fertilization. However, it is important to keep a limited number of organizations involved to avoid complicating the work.

Encouraging cross-fertilization in projects means fostering an environment where diverse ideas and skills can intermingle. Here are some practical steps:

- Form teams with diverse backgrounds, skills and perspectives: include experts from different fields to promote interdisciplinary collaboration.
- Facilitate regular meetings, workshops, and brainstorming sessions. Encourage team members to share their insights, challenges, and potential solutions.
- Organize project dissemination activities in different contexts where all group members can be involved. Participate in international fairs with abstracts, interviews, joint activities.
- Create platform, such as internal wikis, forums or collaboration tools where team members can share research findings, best practices and lessons learned.
- Conduct cross-training where team members learn about each other's areas of expertise. This promotes mutual understanding and encourages cross-fertilization

When cross-fertilisation is successful, it leads to a number of advantages such as:
i) an optimisation of ressources;
ii) further validation of specific methodologies and results;
iii) refinement or specifications of new requirements : one projet could provide information helpful to another one;
iv) increase in the audience : a project could provide access to reach other audiences that are not the primary focus of another project ;
v) limited redundancies in research activities between projects.

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PRACTICE ABSTRACT No: 43

Open Lab Day

Open Lab Day is an event designed to provide low-threshold knowledge on product development, from idea or idea generation to finished product. It is addressed to farmers, start-ups and producers with the aim of inspiring and enabling sustainable innovations in the food sector.

As part of the Open Lab day, knowledge is provided in our integrated Food Processing Lab in workshops on various topics - such as innovation in agriculture, food hygiene, small-scale plants and process optimisation or even construction of frugal processing plants. These workshops offer the opportunity to apply theoretical knowledge directly in practice. This low-threshold format specifically targets farmers and producers. Farmers often come to us with no ideas or many ideas. This format addresses both situations, allowing for the creation of new ideas as well as the development of existing ones. Experts support participants refine their ideas or reflect on them in greater detail.Open Lab Day not only provides knowledge impulses for the development of ideas, but also offers a low-threshold networking opportunity for producers and other stakeholders in the food value chain.

Relevance:

It is important that the Open Lab Day provides easily accessible knowledge, offering incentives for producers to develop and refine new innovative ideas while also allowing space for networking. The knowledge provided and the networking opportunities should inspire praticipants to innovate, cooperate and finally introduce new products to the regional market.

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LICENCE

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PRACTICE ABSTRACT No: 44

Berry Count - a user-friendly ICT tool for efficient forest berry collection and improved stakeholder collaboration

Berry Count is an ICT tool that can be used on mobile phones to find berries and to collaborate with others on berry picking. The ICT tool is an innovative application that combines GPS mapping, seasonal forecasting and real-time updates to improve berry picking. It offers value through color-coded heat maps to locate berries, community sharing for collaboration, and customizable privacy settings.

By combining berry harvest data and remote sensing data, the tool can predict the most potential bilberry picking locations in the forest landscape. These locations are shown in heat maps, created by combining a map layer and a database where the observations are stored together with the predictive models.

The map layer currently covers an area between Vännäs and Nordmaling in Västerbotten. In the database, observations of cloudberries, lingonberries, bilberries and other berries can be registered based on the presence of shrub, flowers and different degrees of ripe berries. There is also a function to register areas and comment on them. This makes it easy to communicate with others about, for example, where there are berries, where berries are picked and to distribute the work of picking. This function can also be used for other information, such as where hunting is taking place, terrain that is difficult to access and areas with ongoing logging.

In practical terms, the app can be used by berry pickers organised in associations by allowing them to plan and communicate where and when they pick. It can also be used by berry companies who want to improve berry traceability by having the pickers report in the app where the berries are picked.

The ICT tool is hosted on a website that can be accessed by logging in via a mobile phone. The design and functionalities of the service are user-friendly and easy to use. The tool can already be used on a limited scale. MapBox is used as a mapping tool and it can be used all over the world, which gives great potential to develop Berry Count further. The design of the ICT tool is flexible and well-suited for furhter scale-up. For example, functions for data sharing in smaller groups may be desirable to add.

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Organised berry pickers and berry companies

Country

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PRACTICE ABSTRACT No: 44

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PRACTICE ABSTRACT No: 45

Industry Stakeholders' Guide: Using Multi-Criteria Analysis for Sustainable Decision-Making

What?

Multi-Criteria Analysis (MCA) is a powerful tool that you, as industry stakeholders in the food and dairy sectors, can use to make informed and sustainable decisions. MCA helps you evaluate innovations and investments by integrating environmental, economic, and social criteria into a comprehensive framework. Through the FAIRCHAIN project, you can see how MCA delivers actionable insights that drive sustainable growth, balancing profitability, environmental impact, and social responsibility.

How?

1. Provide Input and Verify Indicators: Contribute to selecting and verifying sustainability indicators that reflect your business's specific challenges. Collaborate with assessors to define realistic scenarios that evaluate various sustainability pathways.
2. Assess the Importance of Indicators: Engage in discussions to rank each indicator's importance based on your industry knowledge. Focus on indicators critical for the long-term sustainability of your operations.
3. Contribute to Scoring Indicators: Work with sustainability assessors to establish realistic thresholds aligned with industry standards. Use your data and insights to ensure accurate scoring of sustainability indicators.
4. Use Scenario Analysis for Strategic Decision Support: Leverage scenario analysis results to guide strategic decisions. Explore different future scenarios to understand their potential impacts on your business and plan accordingly to achieve sustainability goals.

Why?

MCA provides you with a reliable framework to enhance the sustainability of your innovations and investments. It helps you meet regulatory demands and respond to the growing consumer demand for sustainable products. By using MCA, as demonstrated in the FAIRCHAIN project, you can foster local economic growth, reduce environmental impact, and improve social well-being, guiding your company toward more sustainable practices and investments.

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decision-makers in companies, particularly within the food and dairy industries, such as managers, executives, and strategists

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PRACTICE ABSTRACT No: 46

Sustainability Assessors' Guide: Implementing Multi-Critera Anaysis in Sustainability Evaluations

What?

Multi-criteria analysis (MCA) is a crucial tool for assessing sustainability performance in the fruit and dairy value chains, enabling simultaneous evaluation of environmental, economic, and social dimensions. In the FAIRCHAIN project, MCA is key to assessing innovations across diverse contexts, such as circular economy practices and prioritizing social cohesion. By integrating stakeholders' perspectives, MCA ensures that the assessment model reflects the priorities of industry, researchers, and consumers.

How?

- **Define Objectives and Criteria:** Outline sustainability goals and select indicators that reflect the stakeholders' priorities. For example, energy efficiency was crucial in one region, while social cohesion took precedence in another.
- **Stakeholder Engagement:** Involve diverse stakeholders early in the assessment to ensure that the model sufficiently reflects the industry's current challenges and societal concerns. FAIRCHAIN engaged 15 to 20 stakeholders per case study for context-specific evaluations.
- **Data Collection and Indicator Weighting:** Use methods such as the Analytical Hierarchy Process (AHP) to assign appropriate weights to the indicators. For instance, reducing the carbon footprint was critical in some regions, while others prioritized local procurement.
- **Scenario Analysis:** Develop and evaluate multiple scenarios—ranging from 2 to 5 different pathways—to explore potential sustainability impacts. This approach enabled FAIRCHAIN to thoroughly assess long-term outcomes.
- **Interpreting Results:** Use the results to identify strengths and weaknesses. FAIRCHAIN highlighted the importance of fitting business models and the valorization of co-products to enhance sustainability.

Why?

MCA ensures that sustainability assessments in the fruit and dairy sectors are comprehensive, accurate, and actionable. The FAIRCHAIN project's use of MCA identified key areas for improvement, such as the potential of intermediate value chains to reduce environmental impacts and enhance economic resilience.

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End Users
Professionals, researchers, and analysts involved in evaluating the sustainability of innovations, particularly within the food and dairy

Country
Worldwide

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PRACTICE ABSTRACT No: 46

Links for additional information

FairchainEU
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ABOUT FAIRCHAIN

The FAIRCHAIN project launched in 2020 and coordinated by INRAE, is developing intermediate food value chains in the fruits and vegetable and dairy sectors. Through technological, organizational and social innovations and by developing business models FAIRCHAIN will enable small and mid-size stakeholders to scale up to supply fresh, sustainable and high-quality food products to consumers at a regional level.

FAIRCHAIN PARTNERS

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LICENCE

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PRACTICE ABSTRACT No: 47

Strategic Sustainability Guide: Extending Impact Beyond the Project Life

What?
Traditionally, sustainability assessments of innovations, especially within the framework of EU projects, compare the baseline scenario (without the innovation) to the end-of-project scenario (with the innovation). However, this approach often overlooks the fact that the true impact of many innovations unfolds well beyond the project's conclusion. Sustainability outcomes can vary significantly depending on the pathways chosen by stakeholders after the project ends. The FAIRCHAIN project recognized this limitation and implemented a more strategic approach by integrating Multi-Criteria Analysis (MCA) to evaluate not just immediate impacts but also potential long-term scenarios.

How?
The approach involves defining and scoring multiple potential future scenarios beyond the project's lifecycle. Instead of focusing solely on the end-point of the project, the FAIRCHAIN methodology assessed how different pathways could influence the impact of innovations on sustainability in the long term. By evaluating scenarios based on key indicators such as energy consumption, market stability, and fair trading practices, the project provided stakeholders with a strategic guidance on the steps necessary to achieve the desired sustainability outcomes.

For example, in the Belgian case study, different packaging machine scenarios were evaluated, including small-scale individual ownership, cooperative models, and mobile packaging solutions. Each scenario was scored based on various sustainability indicators, allowing stakeholders to understand which pathways would be most effective in maximizing the impact of innovation on sustainability.

Why?
This extended sustainability assessment model serves as a strategic tool for industry stakeholders and other relevant actors, guiding them in making informed decisions that extend the benefits of innovations well beyond the project lifecycle. By considering multiple future scenarios and their implications for sustainability, stakeholders can better anticipate and manage the long-term impacts of their innovations, ensuring that they achieve their full potential in fostering sustainable growth and development.

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End Users
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Country
Worldwide

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PRACTICE ABSTRACT No: 47

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PRACTICE ABSTRACT No: 48

B2B market assessment

What?
A "B2B market assessment" is a market study whereby a company developing an innovative new product or service investigates the interest of potential future users, who are also professionals. Several B2B market assessments have been carried out as part of FAIRCHAIN to support the case studies and innovations under development. They are demand-driven, meaning that they are designed to meet the specific needs of the case studies at their respective stage of development.

How?
This study used a qualitative approach by conducting semi-directed interviews, consisting of asking open-ended questions within a pre-determined thematic framework, usually divided into 3 parts:
1. understanding the current activity, context, and challenges of the respondent
2. focusing on the technical characteristics of the solution, based on a product/service "factsheet" and other relevant existing materials (pictures, videos)
3. diving into the organizational / business model aspects of the innovative solution

Why?
A B2B market assessment is useful to identify:
- The general perception of the respondents toward a solution
- The level of maturity/readiness of the market
- The possible technical and/or organizational improvements to fit with the needs of the potential future users
- A SWOT analysis of the solution: Strengths, Weaknesses, Opportunities, Threats

Learnings?
Conducting such B2B market study at an early stage of the product/service development can facilitate its future adoption by users by considering their perspective. It can also help save time and money early in the development process. The key success factors of the approach are to sharply target potential users early and to leave questions open while providing guidance.

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End Users
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Country
Worldwide

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PRACTICE ABSTRACT No: 48

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LICENCE

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PRACTICE ABSTRACT No: 49

Business Model Generation workshop

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The FAIRCHAIN project focuses on developing Intermediate Value Chains (IVC) for more sustainable food systems. Designing sustainable regional business concepts to operationalize these IVC is a challenge as it implies many actors and knowledge from multiple domains.

A systemic Business Model Generation (BMG) approach allowing development of the most fitting regional business concepts to ensure long term sustainability in real context was developed and applied to the 6 FAIRCHAIN case studies.

A step-by-step strategic thinking approach was applied for each case study, where knowledge from the WPs was consolidated and developed further through co-creation of knowledge and prototyping. This helped in fleshing out tailored and sustainability-oriented business concepts that favour Intermediate Value Chains (IVC). The methodology relies on the following building blocks/steps:

- Situational assessment: The aim of this situational assessment was to define the "business as usual" and baseline against which the proposed innovations would be compared.
- Definition of prototype case study.
- Feasibility assessment of prototype: Before developing business models, it is important to first examine whether the prototype could be pragmatically realized. This includes an assessment of technical feasibility and quantification of environmental and/or economic impact.
- Policy analysis: Alongside the situational assessment, a policy analysis was done to understand the enabling environment for the prototype.
- Stakeholder consultation: key stakeholders for each of the case studies were identified and consulted through various engagement strategies such as surveys, interviews, etc.
- Regional Business model development for the prototype case study: business models for the prototype(s) were developed and discussed/validated for each case study, through the BMG workshop.

As an outcome, 6 sustainable business concepts are described including relevant actors, organizational set-up, infrastructures and investment efforts, material flows, key success factors, SWOT analysis, policy levers/barriers and mapping of European potential.

End Users
Farmer & Cooperative, Industry & Retail, Policy maker, Technology provider, Other.

Country
Worldwide

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PRACTICE ABSTRACT No: 50

A space for sustainable food information

The Sustainable Food System Innovation (SFSI) Platform is an online environment with information on many aspects of food system (FS) sustainability.

The SFSI Platform aims to: i) share information on FS innovations; ii) publicize FS initiatives; iii) give access to training materials and e-courses about innovative FS; iv) make available public project documents and publications in any form (videos, presentations, infographics); and v) foster collaboration of European and national projects.

The Platform has six Inventories: Case studies, Initiatives, Innovations, Practice abstracts, Publications, and Weblinks. These inventories may be browsed or searched, by criteria which included language, project, end user, and others. All Inventories include outputs from more than 13 finished or running projects. The Platform also has a Training page and a Community groups page.

The Platform is targeted at:

- consumers looking for sustainable food in their area,
- farmer & cooperative, industry & retail looking to share their initiatives or boost their productivity based on recent innovations,
- policy makers looking for practical summaries of project outputs, and
- technology providers looking for innovations or to publicize their own.

Any individual who registers on the Platform can add information to any of the inventories. Registration is free and easy. You are welcome to join.

The Platform is managed by a continuously updated group of European projects which maximizes the variety of information and minimizes the risk of it becoming obsolete. Your Project is welcome to join.

If you are in a European project there is no need to make your own Platform, you are welcome to save time and money by joining the SFSI Platform.

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PRACTICE ABSTRACT No: 50

Links for additional information

Front | Sustainable Food System Innovation Platform (sustainablefoodplatform.eu)

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LICENCE

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PRACTICE ABSTRACT No: 51

Choosing the Right Crowdfunding Strategy for Farmers

Crowdfunding offers a unique opportunity for farmers to secure funding without relying on traditional loans or financial institutions. It allows direct engagement with the community and potential consumers, creating a strong support network and increasing visibility for the farm. Various crowdfunding models could be chosen, each with distinct advantages: donation-based, reward-based, equity-based, and debt-based crowdfunding.

Assess Your Needs: Determine the purpose of the funding. Are you looking to expand, launch a new product, or invest in sustainable practices?

Evaluate Resources: Consider what you can offer backers. Do you have unique products, services, or equity to provide?

Understand Your Audience: Know who your potential backers are. Community members might prefer donation-based campaigns, while consumers might be interested in rewards. Investors looking for equity will have different expectations.

Legislative Considerations: Be aware of regional and national regulations, especially for equity-based crowdfunding. Compliance with these laws is crucial to avoid legal issues.

Sustainability and Market Impact: Highlight how your farm practices sustainability compared to conventional approaches. Crowdfunding can enhance market visibility and position your farm as an innovative and responsible business.

Transferring your crowdfunding strategy into practice can be time-consuming. It involves planning, creating engaging content, and maintaining communication with backers. Costs vary by model but include platform fees, marketing expenses, and potential repayment obligations.

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PRACTICE ABSTRACT No: 51

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LICENCE

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PRACTICE ABSTRACT No: 52

Intermediate food value chains offer win-win situations for farmers, consumers and regions

How we produce, distribute and consume food today is not sustainable. We mainly rely on so-called large value chains. These are highly efficient and economically optimised, but dominated by large producers, processors and retailers. This often comes at the price of hyper-choice of mass-produced convenient food, but unhealthy diets, inadequate incomes and poor working conditions for smaller farms and processors, as well as the exploitation of natural resources such as soil, water and biodiversity. By contrast, in small food supply chains, farmers sell their goods directly to consumers: they achieve higher incomes, and serve consumer demand for healthy, fresh, and locally produced food. However, volumes and distribution are often limited and prices for consumers are higher.

Why not establish intermediate food value chains? They represent a "middle path" and combine the strengths of both short and long value chains while minimizing their weaknesses:

- Small and mid-sized farmers and/or food processors and consumers form a network or strategic alliance;
- This network or alliance scales up food production up to larger quantities, offers a diversified portfolio of high-quality products and sells the food products beyond the local market;
- The members of the network or alliance share the values of sustainable production, trustful and just relationships, and a fair distribution of value created.

Become an initiator or coordinator of an intermediate food value chain in your region! How? Identify those farmers, processors, distributors, customers such as canteens or caterers and consumers who have a vital interest in changing conventional food production and consumption. Invite them to actively engage in a process of co-creation on what a intermediate value chain regionally fit-for-purpose, should look like. Identify the technological, organisational, social and environmental innovations which are required on your journey towards an intermediate value chain.

Other FAIRCHAIN practice abstracts, the innovation platform (https://www.sustainablefoodplatform.eu/en) and our e-learning courses may provide inspiration.

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Country

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement n°101000723

PRACTICE ABSTRACT No: 52

Links for additional information

Youtube videos: Playlist From large and small to intermediate value chains:
https://www.youtube.com/playlist?list=PLqxtyobdLP44oulzkZbYoKpfvBWoUKkYW

E-learning courses:
1. Introduction to Intermediate Food Value Chains:
2. From Short to Intermediate Food Value Chains
https://moodle.iseki-food.net/enrol/index.php?id=86

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www.fairchain-h2020.eu

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PRACTICE ABSTRACT No: 53

Why and how to scale up your short food supply chain?

Are you a farmer who sells your products directly to consumers in a short food supply chain? Do you like your increased independence from large processors and retailers? Is sustainability important to you?

If your answer is „yes", perhaps you would also like:

- Higher economic resilience, e.g. by having fair contracts with large regional customers (e.g. caterers, hospitals, canteens) and better marketing?
- Increased self-esteem and satisfaction from being part of a community with similar values to your own?
- To be more innovative, but lack know-how, money or equipment?

If you answered „yes" again, then consider establishing or joining an intermediate food value chain! An intermediate food value chain is a "middle path" which combines the strengths of both short and long value chains and minimizes their weaknesses:

- Small and mid-sized farmers and/or food processors and consumers form a strategic network or alliance.
- This network or alliance scales up food production to larger quantities, offers a diversified portfolio of high-quality product and sells the food products beyond the local market.
- The members of the network or alliance share the values of sustainable production, trusting and just relationships, and a fair distribution of value created.

How? The initiators or coordinators of intermediate food value chains can be farmers, farmers' cooperatives, regional development agencies, customers or consumers who have a vital interest in changing conventional food production and consumption. These like-minded people agree in a process of interactive dialogue, on what an intermediate value chain fit-for-purpose for your region could look like. Several innovations – new machines and processes, a new organisation or business model, new ways of doing things, lower environmental footprint for your business – will be required on your journey towards an intermediate value chain.

Other FAIRCHAIN practice abstracts, the innovation platform (https://www.sustainablefoodplatform.eu/en) and our e-learning courses may provide inspiration.

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End Users
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Country

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PRACTICE ABSTRACT No: 53

Links for additional information

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LICENCE

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PRACTICE ABSTRACT No: 54

Life Cycle oriented origin analysis

The Life Cycle Oriented Origin Analysis (LCOA) is a tool that allows the origin of food and all its components to be entirely recorded and mapped. It fulfills consumers' desire for transparency regarding food origin and allows producers to document, question, and discuss the sources of their material flows. The LCOA is based on the life cycle assessment approach, capturing all the processes in a product's life cycle except the use and disposal phases. Using a functional unit, such as one kilogram of a head of cabbage, it analyzes the origins of material flows like seeds, fertilizers or packaging and assigns them to the final product.

In collaboration with a team of scientists, the following steps must be defined and elaborated:

- **Product Classification and Scope**: Classify your product and define the relevant material flows.
- **Define the Functional Unit**: Choose a functional unit, such as the product unit including packaging or 1 kg net weight of the packaged product.
- **Identify the Relevant Processes**: Identify all processes that generate or alter relevant raw materials, the final product, and ingredients.
- **Assign Mass Values**: Assign mass values to the identified processes.
- **Specify Cut-off Value**: Determine the maximum number of relevant processes that can be disregarded in the subsequent origin analysis, analogous to LCA.
- **Define Scales for Geographical Unit Areas**: Define appropriate scales for geographical unit areas to specify each relevant process along the supply chain.

Once an LCOA has been successfully carried out, information on the origin of the material flows can be provided. The results can be discussed by producers and communicated to the public, creating greater transparency for both producers and consumers.

Relevance:

For the food producer, having a LCOA offers a strong Unique Selling Proposition (USP), because most competitors do not jet offer this quality of information about the origin of their products.

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PRACTICE ABSTRACT No: 54

Links for additional information

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PRACTICE ABSTRACT No: 55

Easy Life Cycle Inventory with MEANS-InOut

The MEANS-InOut software in two words

What?

A Life Cycle Inventory (LCI) is the quantification of resource consumption (energy, raw materials) and emissions (to air, water, soil, waste) throughout the life cycle of a system. It is an essential step in performing a Life Cycle Assessment (LCA). The MEANS-InOut software is designed to assist users in the agricultural and food sectors with this complex task. It is useful both for LCA practitioners who are not familiar with inventory production for these sectors and for non-practitioners who wish to model inventories for their agricultural and food systems

How?

The MEANS-InOut software is accessible online at https://means.inrae.fr/.
Users describe their system through pre-filled forms. This allows them to:

- Precisely describe the system and methodological choices
- Calculate associated emissions using built-in emission models
- Generate LCIs exportable to LCA software

Why?

Modeling LCIs (Life Cycle Inventories) is a complex task requiring both LCA expertise and sector-specific knowledge. It is time-consuming and data-intensive. However, it is a crucial step in assessing the environmental impacts of a system and must be carried out diligently. Using tools like MEANS-InOut enables users to leverage the expertise of the developers to quickly produce more robust LCIs.

Use cases

The MEANS-InOut software has been used in the FAIRCHAIN project for Greek and Belgian case studies (respectively to produce inventories for sheep and goat milk production and for apple production).

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Country

Worldwide

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PRACTICE ABSTRACT No: 55

Links for additional information

https://means.inrae.fr/

HTTPS://WWW.SCIENCEDIRECT.COM/SCIENCE/ARTICLE/PII/S2352340923003268

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PRACTICE ABSTRACT No: 56

How to collaborate with European Projects

Collaboration with other ongoing European projects can significantly improve the results and reach of all parties involved. Here are some strategies and good practices to promote collaboration:

1. Identify Potential Partners : i) *Map Related Projects*: create a landscape analysis to identify other projects that share similar objectives, themes, or target audiences. Utilize platforms such as the European Commission's Cordis database or networks like Eureka and Horizon Europe; **ii)** *Network Events*: Attend conferences, workshops, and networking events to engage with other project teams.
2. Establish Clear Communication Channels: i) *Schedule regular Meetings* (virtual or in-person) to discuss progress, challenges, and opportunities for collaboration; **ii)** *Use Shared Platforms* and online collaboration tools (e.g., Slack, Microsoft Teams, or Trello) to facilitate seamless communication and document sharing.
3. Define Collaborative Goals : i) *Establish Joint Objectives and clear collaborative goals* that benefit all parties, such as co-organizing events, sharing resources, or common research outcomes; **ii)** *Ensure Mutual Benefits*: The collaboration should offer tangible benefits for all projects involved, such as enhanced visibility, shared knowledge, and combined expertise.
4.Leverage Resources and Expertise : i) *Share Resources*: Collaborate on resource sharing, including research materials, databases, funding opportunities, and technical expertise; **ii)** *Facilitate knowledge exchange* through workshops, training sessions, or webinars.
5. Innovative Joint Activities: i): *Organize co-host Events* (joint conferences, webinars, or workshops) to promote findings and disseminate knowledge broadly; **ii)** *Engage in joint research initiatives or publications* to combine findings and methodologies.
6. Cross-Promote Activities : i) *Define co-marketing Initiatives*: Use newsletters, social media, and websites to promote each other's activities, thus leveraging each partner's audience; **ii)** *Develop co-branded materials* to enhance visibility and recognition among stakeholders.
7. Maintain an Agile Approach : i) *Define Flexible Collaboration Models*: Be open to evolving the collaboration as projects progress. Adapt goals and activities based on the changing landscape or emerging insights; **ii)** *Establish Mechanisms to give and receive feedback* on collaborative efforts, allowing for continuous improvement
8. Document Collaboration: i) *Keep Records*: Document all collaborative activities, decisions, and outcomes to foster transparency and accountability; **ii)** *Develop metrics* to assess the effectiveness and impact of collaborative efforts.
9. Engage Stakeholders: i) *Broaden the Network*: Involve stakeholders such as local communities, industry partners, and policymakers to enhance the impact of collaboration; **ii)** *Consult Stakeholders*: Seek input from diverse stakeholders to align collaborative activities with broader societal needs.
10. Explore Funding Opportunities : i) *Joint Funding Applications*: Investigate opportunities for joint funding applications to bolster financial resources for collaborative initiatives; **ii)** *Define Resource Allocation Models*: Discuss and agree on how to allocate resources effectively among collaborating projects.

Through effective networking, clear communication, shared goals, and innovative activities, ongoing European projects can foster meaningful collaborations that enhance impact and contribute to common objectives.

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End Users
Farmer & Cooperative, Industry & Retail, Policy maker, Technology provider, other

Country
European countries

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Links for additional information

FairchainEU
FAIRCHAIN_EU
www.fairchain-h2020.eu

All Practice Abstracts prepared by FAIRCHAIN can be found here!

ABOUT FAIRCHAIN

The FAIRCHAIN project launched in 2020 and coordinated by INRAE, is developing intermediate food value chains in the fruits and vegetable and dairy sectors. Through technological, organizational and social innovations and by developing business models FAIRCHAIN will enable small and mid-size stakeholders to scale up to supply fresh, sustainable and high-quality food products to consumers at a regional level.

FAIRCHAIN PARTNERS

DISCLAIMER

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LICENCE

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