european dairy association

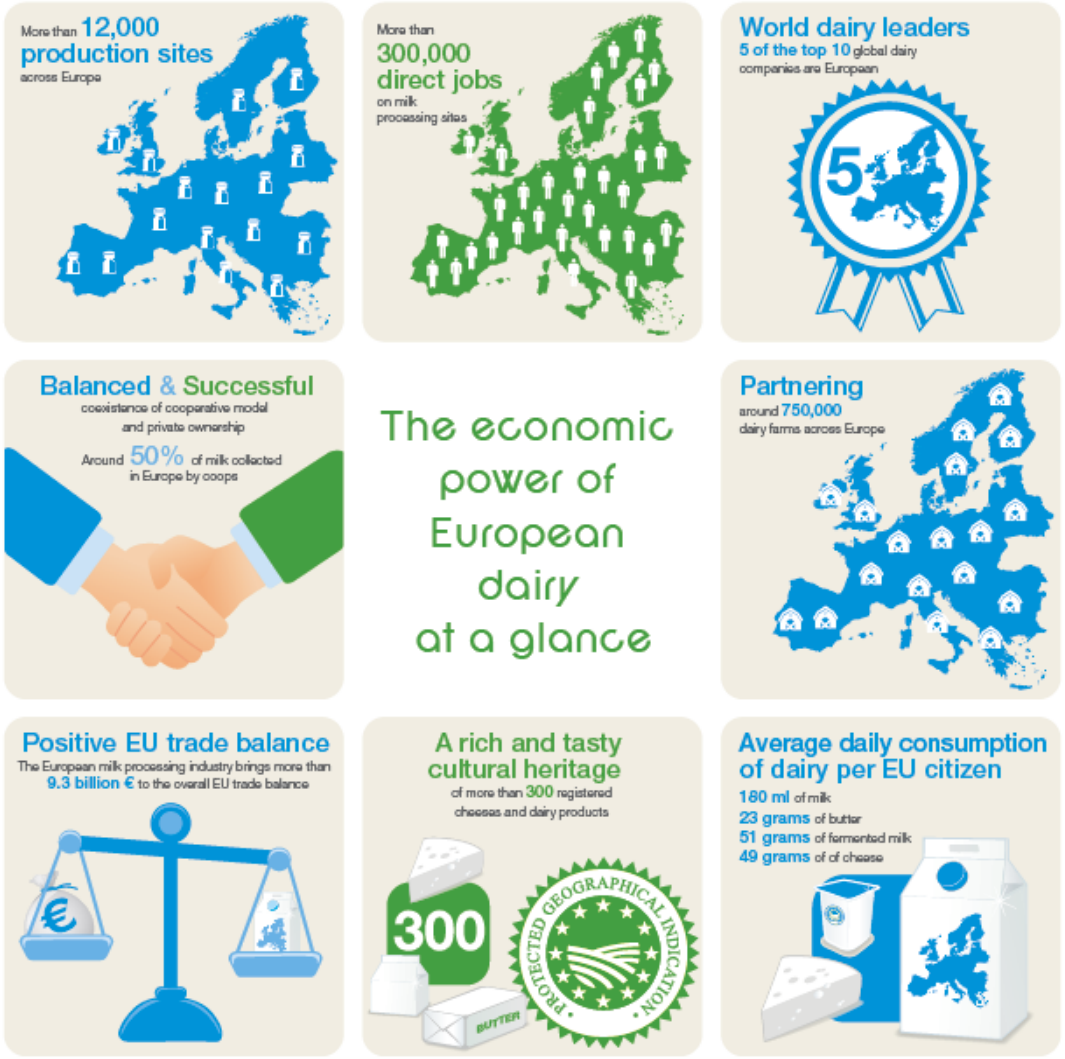
The Dairy PEF project

2 November 2017, Ittigen, CH (via Skype)

Hélène Simonin

European Dairy Association

= 22 national dairy industry associations of EU Member States



President: Michel Nalet, FR, Lactalis

Decreased GHGE by 24% since 1990

20% water saved in the dairy chain since 2005

eda european dairy ass

‘Green claims’…

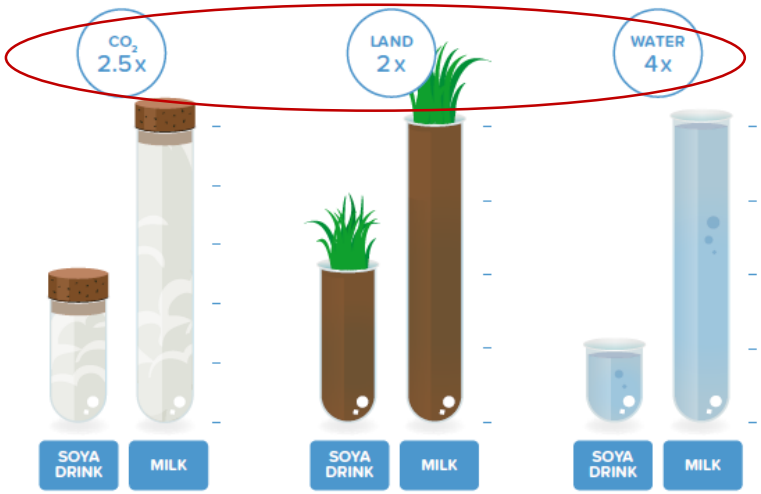
Sustainable food: **2020 Vision**

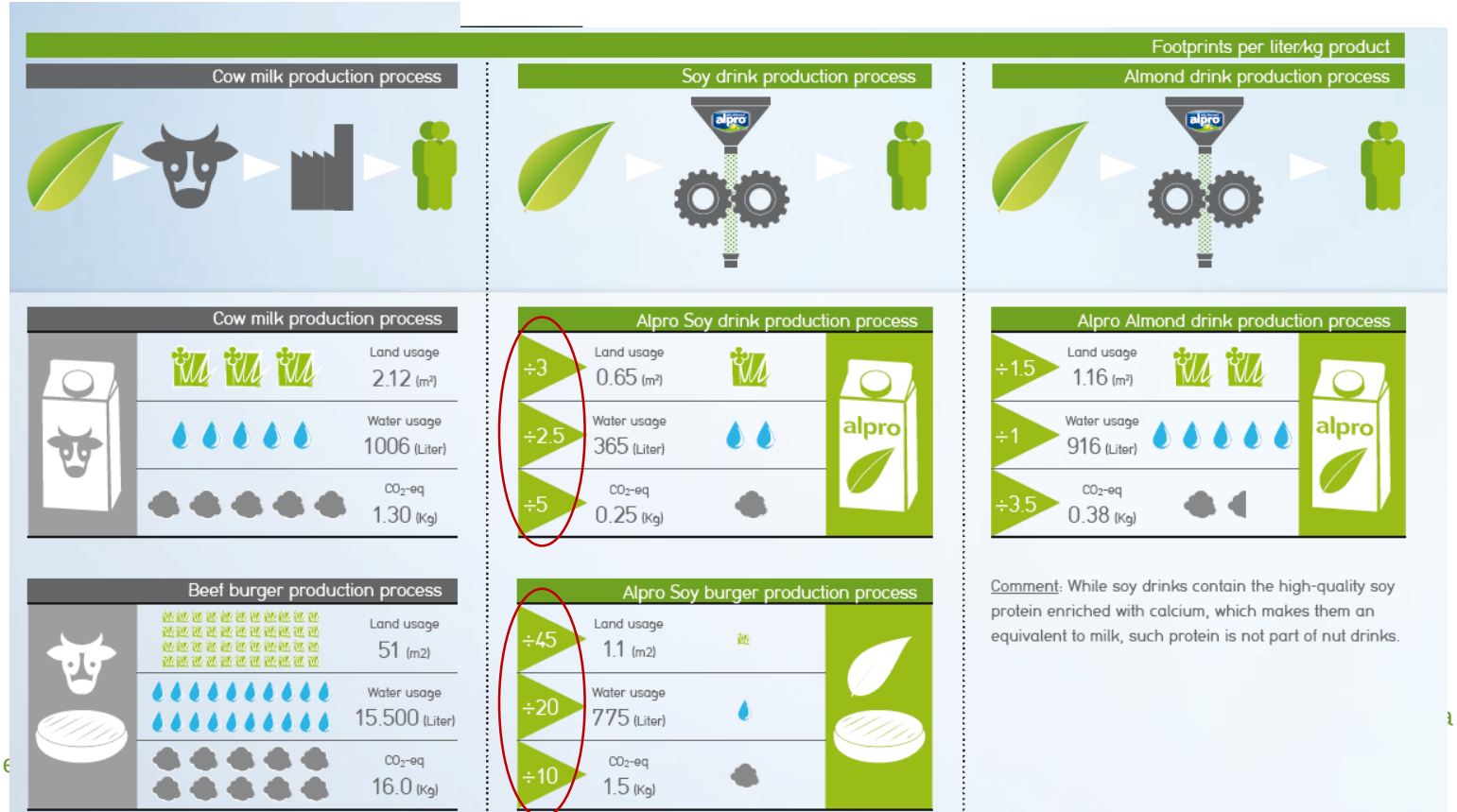
There’s a broad awareness that as a society we are exceeding the natural limits of our planet. We will need two planets by 2030 to meet overall consumption demands if we carry on as we are.

The core of our vision on sustainability is that Alpro can be part of the solution. Plant-based foods are resource efficient compared to animal-based foods such as dairy products. In other words, they use less planet! We firmly believe that the biggest opportunity for change lies when more consumers consume our products. Together we are taking the necessary steps for our food system.

Plant-based uses less planet!

As shown in a recent Life Cycle Analysis (LCA) report[1], eliminating animals from the food production process has a significant impact: it’s a choice that results in major savings in CO_2, land and water use. That’s demonstrating that changing the way the world eats for the better is feasible.





The PEF initiative

Resource Efficiency Roadmap

2020

April 09th 2013, the European Commission published:

Communication: Single Market for Green Products

Product Environmental Footprint

(PEF) Guide

Organisation Environmental Footprint

(OEF) Guide

Recommendation

Pilot testing phase: 3 years

Objective

Higher uptake of green products and of greener practices

New methodology is developing

The Dairy PEF

to the world of dairy

The Dairy Product Environmental Footprint partners

3 industry associations

6 dairy processors

1 retailer

1 LCA consultant

4 public and research bodies

3 packaging associations

What is the Dairy pilot's aim?

- Cooperative effort of stakeholders of the whole chain
- Build up methodology from within the sector
- Realise a simple and workable tool for all actors involved, and all external interested
- European, and global dimension
- Build on sector's many years experience of environmental improvement - bring forward whole sector

Steps of the PEF project

1. Definition of the **category**
2. Definition of **representative product***
3. PEF **screening** : identification of most relevant life cycle stages & processes
4. **Draft** of category rules
5. **Supporting studies**: identification of the **most relevant impacts**
6. Determination of **benchmarks**
7. **Communication** phase – studies testing communication vehicles
8. Final changes in category rules – based on conclusions of studies

2014 2015 2016 2017

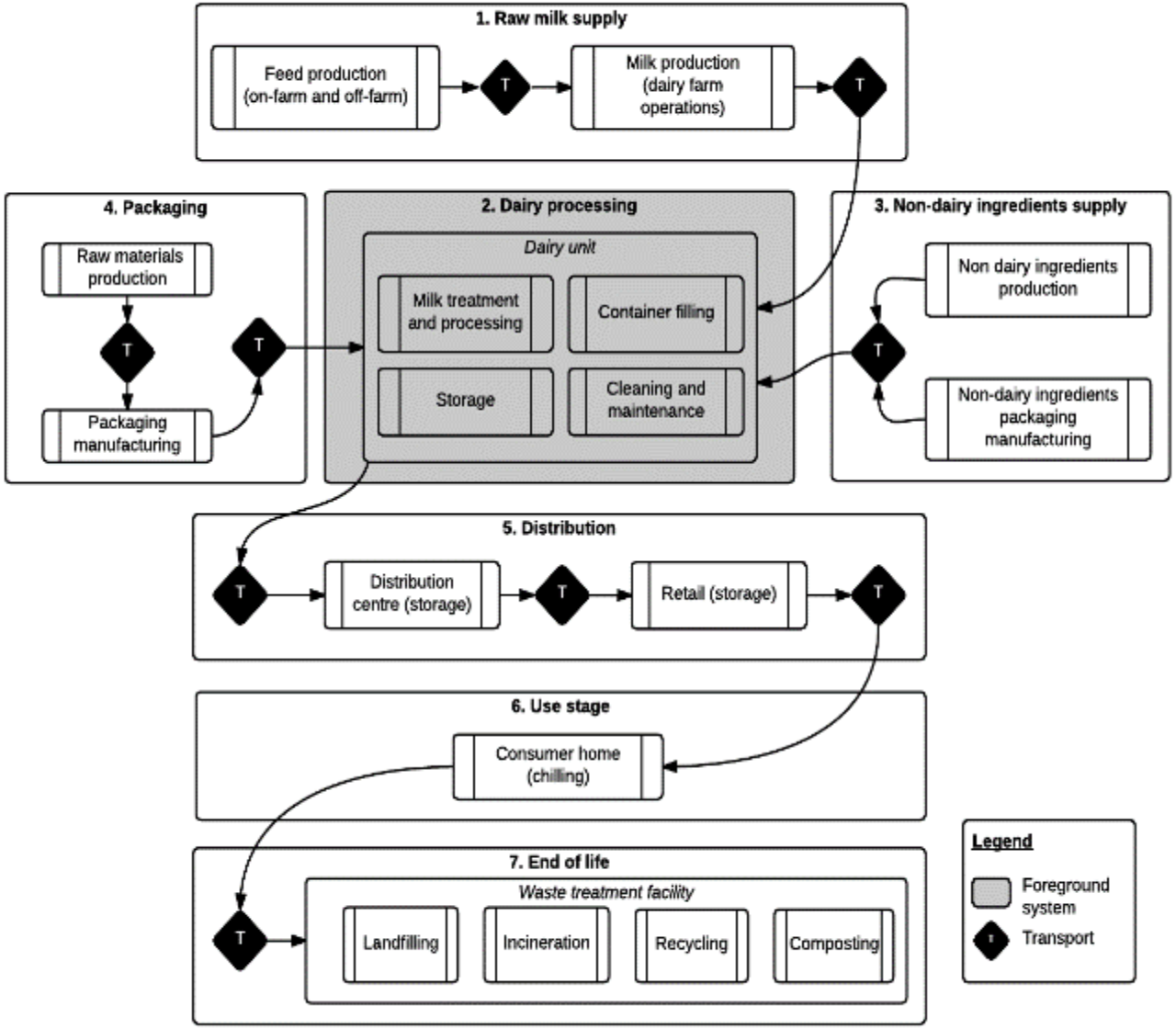
* May or may not be a real product that one can buy on the EU market. Especially when the market is made up of different technologies, the "representative product" is a virtual (non-existing) product with the average EU sales-weighted characteristics of all technologies around.

Subcategories and supporting studies

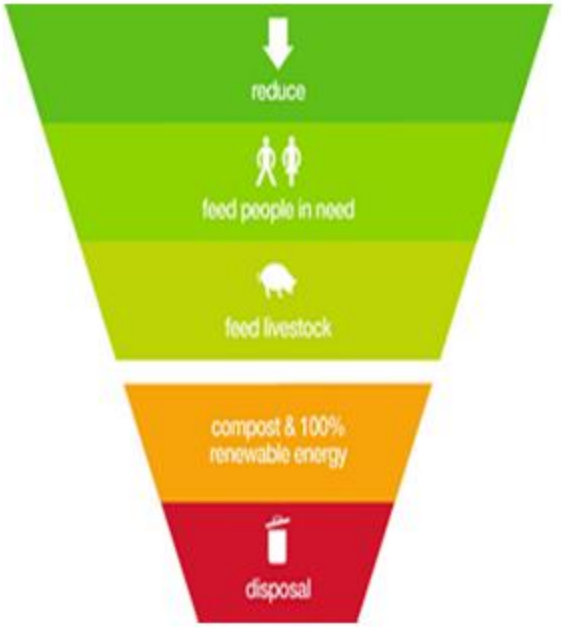
Sub-category	Representative product
Liquid milk 	Average of standardised milks with different fat content and thermal treatment
Dried whey products 	Average whey powder, whey protein powder and lactose powder
Cheeses 	Average of unripened, ripened (soft) and ripened (hard) cheese
Fermented milk products 	Average of spoonable yogurts and fermented milk drinks
Butterfat products 	Average butter and and dairy spreads

Liquid milk model

Liquid milk	EU-28
Fat content	
Skimmed (<0.3%)	6%
Semi-skimmed (1.5-1.8%)	61%
Whole milk (3.5%)	33%
Thermal treatment	
Pasteurised or filtered	41%
UHT	59%
Packaging	
Multilayer carton 1000 ml	60%
Plastic bottle 1000 ml	35%
Glass bottle 1000 ml	5%
Sensitivity: pouch 1000 ml, plastic (PET) bottle 1000 ml	



Food losses



Food waste

Life Cycle Assessment : What for ?

- Identify “hot spots”
- Compare alternatives
- Benchmark performance
- Invest resources intelligently
- Set goals & measure progress
- Manage risk
- Communicate, label & substantiate
- And more…

…based on **science**

Life Cycle Assessment : For who ?

- Consumer: differentiate functionally equivalent products to make more « ecological » choices
- Manufacturer: looking for way to reduce the impacts associated with its products, to communicate their environmental merits
- Government: refine environmental legislation, elaborate incentive measures

Most relevant life cycle stages

- Most relevant life cycle stages:
  - Raw milk production
  - Distribution (except for dried whey products, since out of system boundaries)
  - Dairy processing
  - Packaging (for liquid milk and fermented milk products only)
  - Use (for liquid milk only)

Photo: HSR

- Most relevant processes (per life cycle stage):
  - Raw milk: Feed production and direct emissions at the farm
  - Dairy processing: Electricity, water use and wastewater treatment
  - Packaging: Raw materials manufacturing, especially liquid packaging board (LPB) and plastics
  - Distribution: Chilled transports, chilled storage at retail and transport by the consumer
  - Use: Dishwashing[1]
  - End-of-life: not relevant

Most relevant impact categories

- Choice of seven impact categories

+ Biodiversity and deforestation

Impact category	Rationale
Climate change	GHG emissions from cattle (feed production, enteric fermentation and manure) is a recognised environmental issue worldwide. The study showed that this is among the best known and most reliable impact category, for which key elementary flows are commonly measured or documented.
Water resource depletion	Dairy products being at the top of the food pyramid, they play a role in the competition for water, through feed production and drinking needs of cattle. Use of water resources can be influenced by practices at dairy farming.
Freshwater eutrophication	Use of P fertilisers (organic or mineral) for feed production is a well-known environmental issue in the agricultural sector. Eutrophication was also identified as a potential issue in the wastewater treatment of effluents from dairy processing units.
Marine eutrophication	Use of N fertilisers (organic or mineral) for feed production is a well-known environmental issue in the agricultural sector. Proper management of the nitrogen flows, from feed intake to manure is also an important lever for dairy farmers to improve their sustainability record. Highlighted as potentially relevant through normalisation.
Freshwater ecotoxicity	Ecotoxicity is a key issue in working towards sustainable agriculture. Dairy farmers can act upon the use of toxic substances and influence toxic impact of dairy products on natural ecosystems.
Land use	Dairy products being at the top of the food pyramid, they play a role in the competition for arable land, through feed production and grazing areas. Land use and biodiversity can be influenced by practices at dairy farming.
Acidification	Use of N fertilisers (organic or mineral) for feed production is a well-known environmental issue in the agricultural sector. Proper management of the nitrogen flows, from feed intake to manure is also an important lever for dairy farmers to improve their sustainability record. Highlighted as potentially relevant through normalisation.

Photo: HSR

Why “communicate” ?

- Change impact of products (e.g. chain partner)
- Raise awareness (e.g. NGO, government)
- Increase visibility and positive image (production chain)
- Competition (e.g. retailer schemes)
- Change habits/ direct markets (policy makers)
- Show positive evolution / improvement (chain partner)
- Inform and educate consumers (production chain)

Way to communicate depends on what is its aim

european dairy association

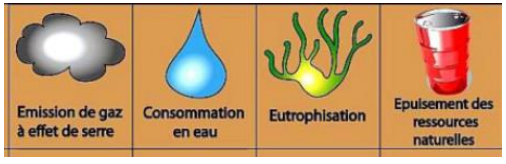
Light | Scale | Values | Medal

Communication

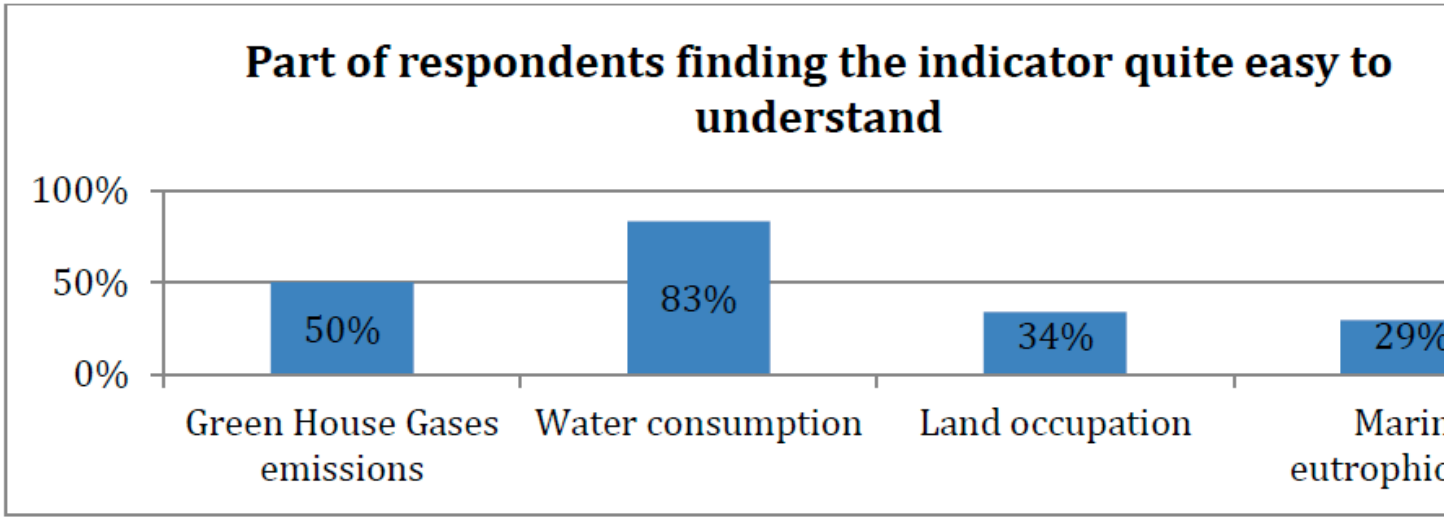
➥Idea to improve envi footprint

➥Dairy pilot tests:

- Study 1: A specific release in the company monthly newsletter sent to up to the **farmers** working with the company
- Study 2: **B2C label** on PEF performance with information regarding the three impact categories in comparison with some other labels, e.g. different PEF performance labels (lights, scale) and sustainability label with information to environmental information, animal welfare, social aspects
- Study 3: a dedicated **survey**, in **dairy-related circles** and association environment; with very simple communication of performance numbers and overall message on 'acting together'

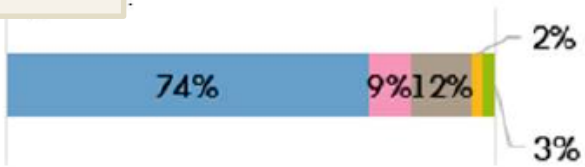



Greenhouse Gas Emissions
CO_2
Equivalent to 500 grams of CO2
Land Occupation
Creates a 28 Kg Carbon deficit
The environmental impacts*
of 50 grams of Butter
Water Consumption
0,6 Litres of water
Aquatic Eutrophication
Equivalent to 2 grams of nitrogen

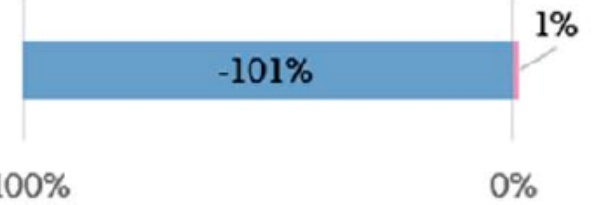

Part of respondents finding the indicator quite easy to understand
100%
50%
0%
50%
83%
34%
29%
Green House Gases emissions
Water consumption
Land occupation
Marine eutrophication

Chaque étape du cycle de vie du [redacted] :

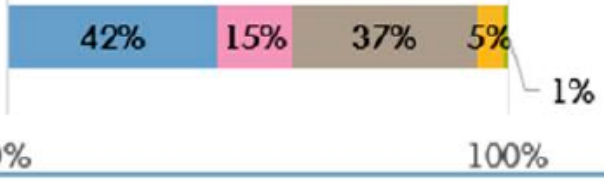
- *contribue au changement climatique (% de kg CO2).*



- *agit sur la transformation des sols (% de Carbone soustrait du sol).*



- *contribue à l'épuisement de la ressource en eau (% de m3 d'eau équivalent).*



Légende :

- Matière première (lait)
- Emballages
- Transformation
- Transport et distribution
- Consommation
- Fin de vie

Pour aller plus loin

Vous êtes de plus en plus nombreux à vous soucier de l'impact environnemental de votre exploitation. Cette étude illustre tout l'intérêt du travail réalisé sur la limitation des Gaz à Effet de Serre de la filière laitière et encourage la poursuite des pratiques favorisant le stockage de carbone dans les sols. La ressource en eau, nécessaire à la production laitière, apparaît également comme un axe fort sur lequel il nous est important d'agir à chaque étape du cycle de vie : aussi bien en fromagerie qu'en exploitation.

Quelle est la performance de votre exploitation sur ces trois indicateurs ? Bel vous accompagne dans l'identification de vos bonnes pratiques environnementales et de vos axes de progrès. A l'issue d'un diagnostic réalisé avec le logiciel Cap'2Er, des pistes d'actions personnalisées vous sont proposées, adaptées à votre exploitation.

PAR CURIOSITÉ, J'AI RÉALISÉ UN DIAGNOSTIC AVEC V. GALLARD. MÊME SI CELA RESTE LOIN DE MON QUOTIDIEN CELA M'A PERMIS DE ME SITUER.

Dominique DAMAY
Eleveur en Mayenne

POUR NOUS PRODUCTEURS, LA NOTION DE GAZ À EFFET DE SERRE EST NOUVELLE. LE CAP'2ER NOUS A PERMIS D'APPRÉHENDER L'IMPACT ENVIRONNEMENTAL DE NOS PROJETS (COUVERTURE DE FOSSE).

Bertrand GESLIN
Eleveur en Sarthe

***Qu'est-ce qu'une Analyse de cycle de vie (ACV) ?**

L'ACV est un **outil de mesure des impacts environnementaux d'un produit** – dans le cas présent, le Mini Babybel®. Son objectif est de connaître et comparer l'impact d'un produit sur l'environnement tout au long de **son cycle de vie** : de la production des matières premières (le lait par exemple) jusqu'à son traitement en fin de vie (recyclage, etc) en passant par l'exploitation des ressources naturelles.

What is ahead, what value?

- Pilot phase - What works, what does not?
  - Data requirements – esp. at raw milk production stage
  - Question of benchmarks – meaning and usefulness?
- Harmonised approach - positive
- Communication phase - transporting information to improve environmental performance
  - Build on existing experience in chain
  - No interest in on-pack labelling
- Positive outcome of work together
- 'Improvement tool'

Upcoming timeline

➥What is ahead?

- Future EU legislation
- Use in companies – already exists: improvement tool, ecodesign, environmental measurement
- Updating data sets esp. on farm level

Positioning on PEF

➥What use in companies?

- many still reflect, complex but **helpful tool** to preven misleading claims and show improvement; several indicators positive as not only carbon-related, but **complexity** not easy to communicate
- Use in companies has started: ecodesign, **environmental improvement tool**, supply chain contacts

➥What idea of legislative frame

- **Voluntary framework**; no distortion across EU (and beyond) if harmonised approach

➥Communication/ information tools

- **Business information** (CSR; Annual reports); no on-pack labelling; possibly website communication, thinking about alternative approaches (e.g. QR-codes)

Working for an always more healthy and sustainable dairy sector

Photos: divers

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Thank you

Hélène Simonin

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