Towards Net Zero
Commodity masterclass

Milk

23rd of October, 2024

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Towards Net Zero Commodity Masterclass

Expert Speaker

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Global Milk Upstream & Sustainability Director
Bel Group

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Group Sustainability Director
Bel Group

All initiatives are subject to antitrust rules and will be vetted by external counsel

The Towards Net Zero coalition is accelerating the journey towards Net Zero across 3 priority initiatives

3 Initiatives

With the support of BCG BOSTON CONSULTING GROUP

	1 DEFINE COMMON PROPOSED SUPPLIER SUSTAINABILITY TARGETS	2 LAUNCH COMMODITY CAPTAIN MASTERCLASSES	3 MOBILIZE THE COLLECTIVE VOICE OF RETAIL ON CLIMATE ACTION & METRICS
Goals	Align on minimum supplier targets across key dimensions to accelerate supplier decarbonization	Educate TNZ community on commodity decarbonization leveraging expertise of leading members	Harmonize carbon metrics requested from manufacturers across the value chain, enhancing transparency and creating consistency across the sector

Ad hoc support

- Biomethane focus group
- Retailer GHG accounting

Additional initiatives to progress in the future

- Supplier scorecard
- Supplier training
- Knowledge repository
- Green power – other locations
- Green power – supplier access
- Joint in-store retailer & CPG sus. campaign

Agenda

- Provide overview on **commodity context**
- Share **regional specificities**
- Present **solutions** + case studies
- **Questions, answers & next masterclass** in series

Unrecorded section

- Discussion on **opportunities to partner & scale** for impact

BEL - A 159-YEAR-OLD FAMILY BUSINESS & A MAJOR INTERNATIONAL PLAYER OF HEALTHY SNACKING

- €3 645 million Net Sales in 2023
- 397 million consumers in 120 countries
- 3rd branded cheese player in value*
- Strong leader of the apple pouch sauce market
- 3 complementary areas: Cheese, Fruit & Plant-Based
- 31 production sites in 15 countries
- 50 subsidiaries in 32 countries
- 10 902 employees

BEL, OUR MISSION MODEL IS ANCHORED ON OUR FARM TO FORK CSR STRATEGY

HEALTHIER FOOD, SUPPORTING FOOD TRANSITION

FIGHT FOR THE PLANET

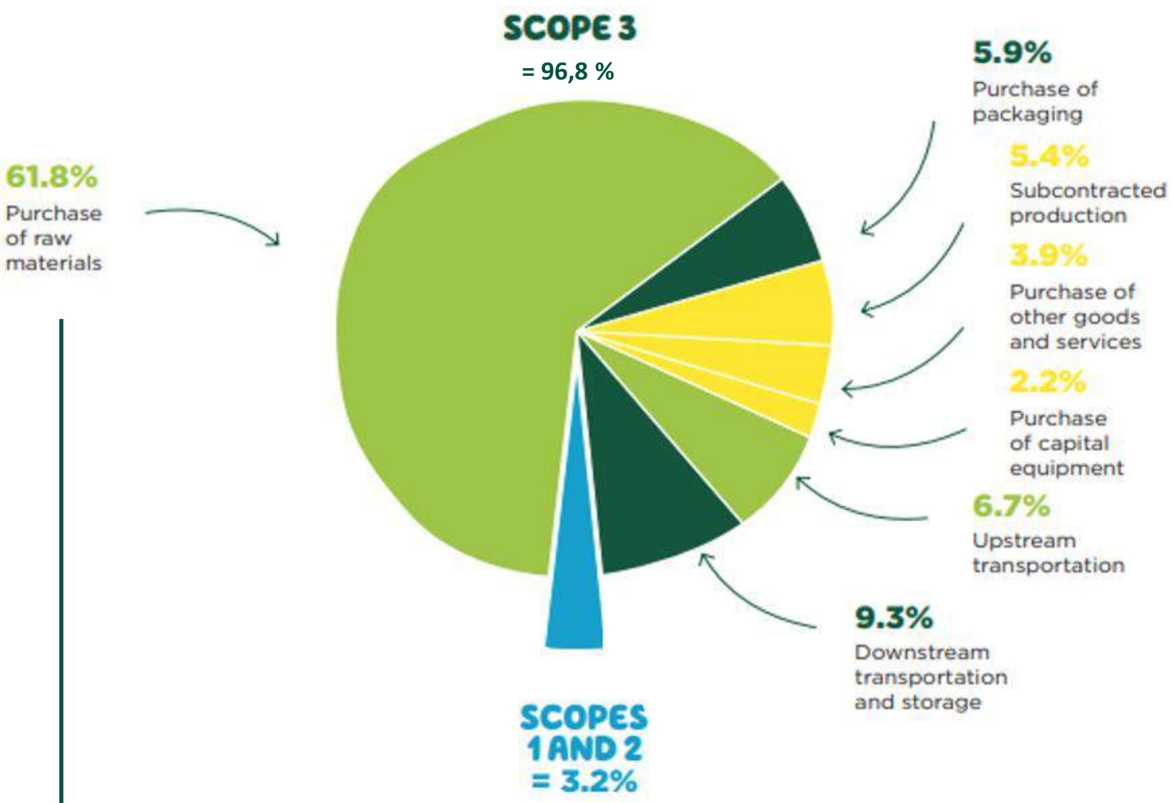
ACCESSIBLE PRODUCTS FOR ALL

SHARED VALUE FOR ALL OUR ECOSYSTEM

MISSION-LED COMPANY

HEALTHIER AND MORE SUSTAINABLE FOOD FOR ALL
FOR TODAY'S AND TOMORROW'S GENERATIONS

BEL GLOBAL CARBON FOOTPRINT



Raw milk = 35,3%
Other Dairy Raw Mat = 20,7%
Apple = 0,4%
Others = 5,5%

4 millions tons CO_2 eq / year

Our factories represent 3% of Bel global carbon footprint → 97% of Bel Carbon footprint is not "directly" in our hands

The biggest impact comes from raw materials among which our milk collected represent half of it.

Context

Bel worldwide milk supply …

> 500 M$ market value
(Bel, 2023)

~1.000 kT of raw milk collected
(Bel, 2023)

…coming from 8 dairy basins

France	**~470 kT**
Azores	**~125 kT**
USA	**~120 kT**
Slovakia	**~90 kT**
Iran	**~80 kT**
Portugal	**~60 kT**
Poland	**~30 kT**
Canada	**~30 kT**

(Note: Estimated collected volume for Bel, thousand tons (kT), 2023)

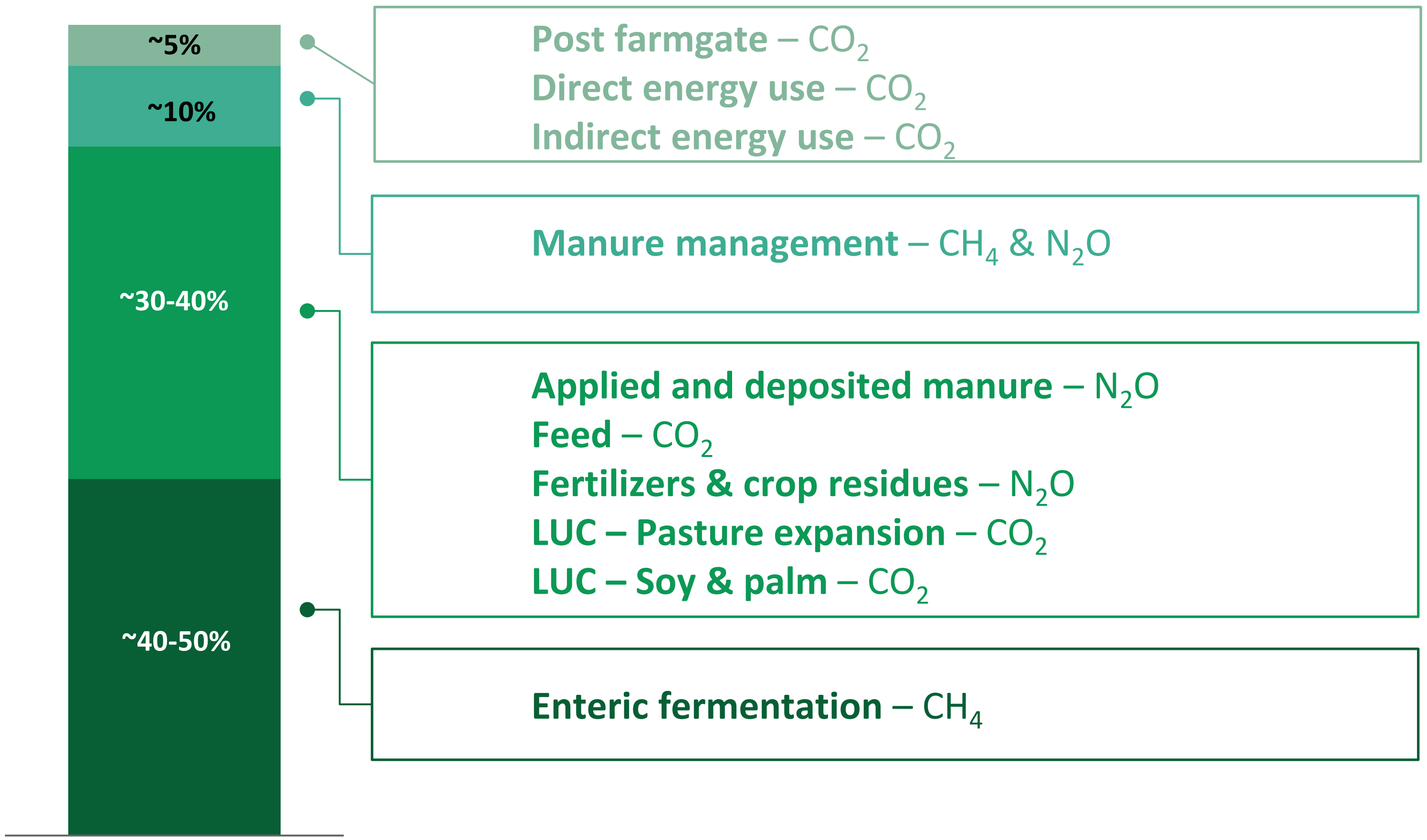
Raw milk contributes to 35% of global Bel emissions (Scope 1, 2 & 3)

35%
of global emissions
(Bel, 2023)

And total dairy raw materials…

56%

4 main drivers for raw milk emissions factors



Note: Global emissions by source. Relative contribution of main sources of emissions from global livestock supply chain - FAO

Key challenges to address for raw milk decarbonization

Key decarbonization challenges across commodities

- **Large & fragmented supplier** landscape
- **High degree of variability** in system across regions
- **Limited awareness** on **solutions available** (e.g., at farm level)
- **High upfront carbon** reduction **costs** — Bovaer®
- **Lack of financing** for adoption of low-carbon and regen. p… — Bovaer®
- **Short-term reduction in yield** & farmer revenues
- **Speed and rate of adoption of best practices** on farm
- **Lack of low-carbon technologies** available at scale
- **Lack of** accurate carbon data at farm level
- **Lack of measurability** & common certifications
- Lack of **unified and stable regulatory** & policy landscape
- **Strong dependency on Nature** (land, climate)

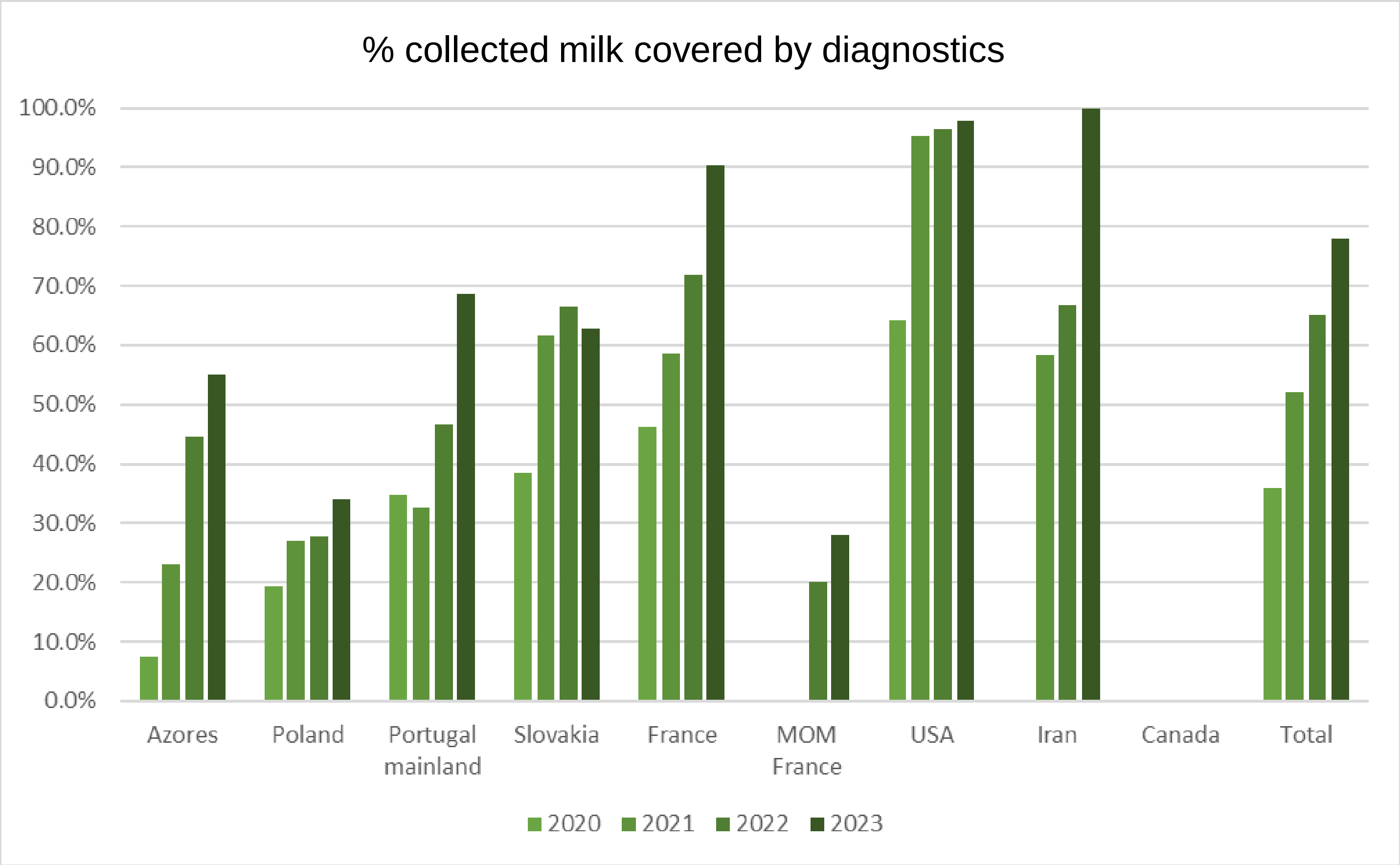
Challenges with highest impact for commodity — Other applicable challenges

Regional specificities

There are 3 different market archetypes for milk production

	Mega Farm	Intensive Farm	Family Farm
			
Herds	• *> 500*	• *100 to 500*	• *100 <*
Housing	• *Free confined barn. Specific farms (Calf farms, heifers farm, etc.)*	• *Mainly free confined barn, access to grazing for dry cows or heifers*	• *Pastoral based: access to grazing whole or part of the year*
Feedstock	• *Corn silage & local soy production (US)* • *Imported feed (Iran)*	• *TMR => mainly corn silage and concentrate*	• *Grass part of the ration, corn / grass silage, local protein + concentrate*
Share in Bel milk collection	• ***~20%** of Bel milk collection*	• ***~20%** of Bel milk collection*	• ***~60%** of Bel milk collection*
Geographies	• *USA, Iran*	• *Slovakia, Portugal, Canada*	• *France, Azores, Poland*

Significant regional specificities exist for milk carbon data



CAP'2ER®

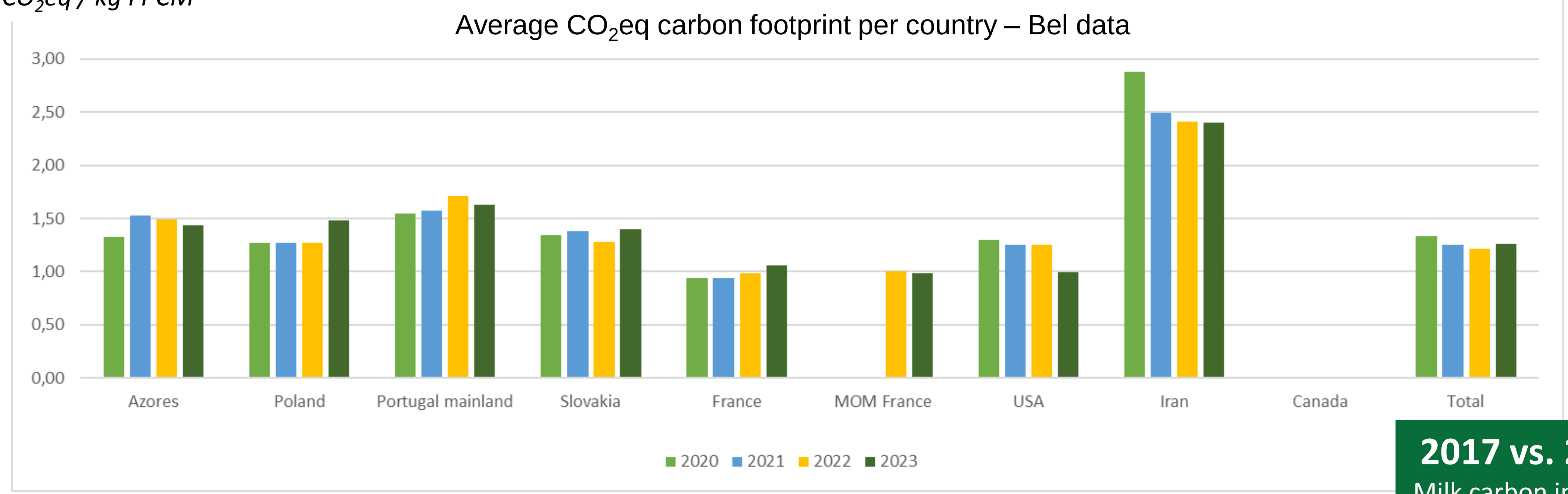
Environmental Stewardship

Other countries

COOL FARM TOOL

Significant regional specificities exist for milk carbon footprint

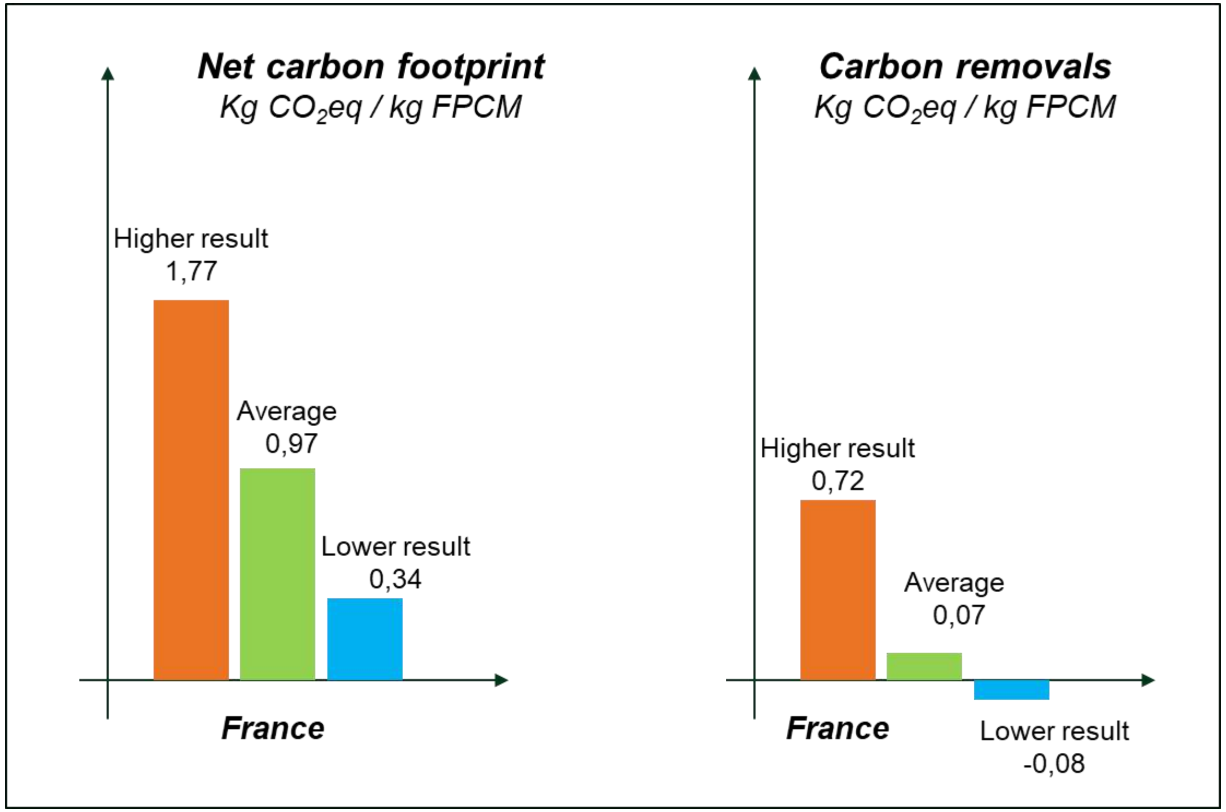
Carbon footprint
Kg CO_2eq / kg FPCM



2017 vs. 2022
Milk carbon intensity
-12%

=> Heterogenous results in-between dairy basins

Also, significant specificities at country level

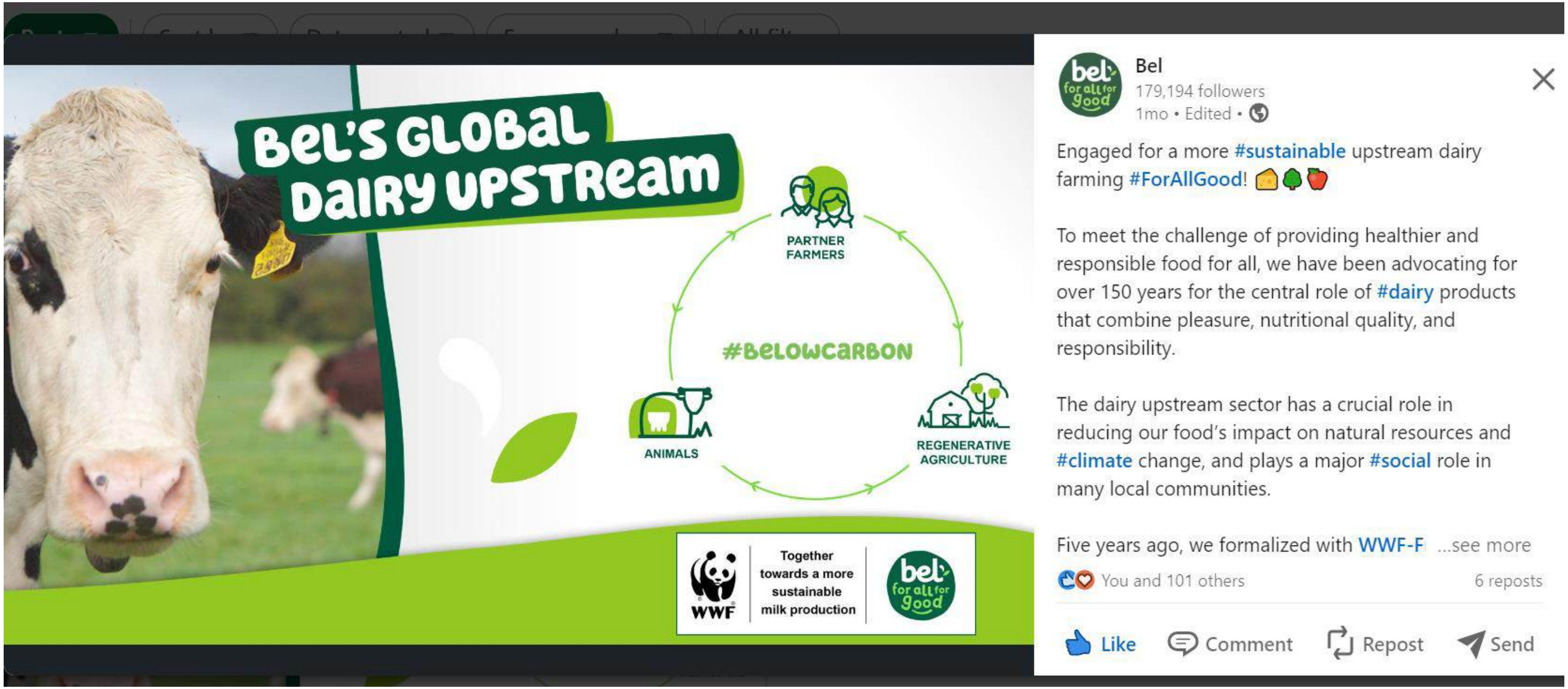


Consolidated CAP'2ER results for French farms for the last 4 years

=> High variability within a dairy basin

Solutions

A unique global framework with medium / long term objectives



Bel has identified 32 key levers to address milk decarbonization

Main levers activated on the field

Levers	Carbon reduction potential on farm	Typical time to impact	Expected ROI for farmers	Overcost for farmer
Reduce unproductive animals	Till 5%	> 1 year	Positive	No
Yield optimization	1 to 5%	> 1 year	Positive	No
Manure storage conditions	2 to 3%	Immediate	Negative	> 5 K€ investment
No deforestation feeding for EU (0 soy and 0 palm)	Till 7%	Immediate	Negative on animal feeding cost	Depending on commodities market
Add unsaturated fatty lipids in ration (e.g. linseed)	~5%	~ 6 months	Positive on yield & animal welfare	Till 1cts / kg of milk
Feeding additive to mitigate enteric methane	10-15% CO_2eq (-20 to 30% of CH_4)	Immediate	Negative	~1cts / kg of milk
Regenerative practices for animal feeding production	Till 5%	3 to 7 years according to practice	Positive but risk taken during transition	Depending on practices
Agro-ecological structures (Hedges, trees)	Carbon removals	> 1 year	Negative if no carbon credit	Investment
Manure management – Biodigester, methanization	Till 5%	Immediate	Negative	Very high investment

=> After the carbon diagnostic, the Bel milk adviser will define 2 to 4 levers to activate

Applicability and impact of levers varies across Bel dairy basins

Levers									Key factors impacting applicability of lever
Reduce unproductive animals	Medium	High	Low	High	Medium	High	High	Low	Training, access to nutritionist
Yield optimization	Medium	High		High	Medium	Low	High		Access to nutritionist, training
Manure storage conditions	High		Low	Low	High	Medium	Low	Low	Government incentives, technology, regulatory
No deforestation feeding for EU	High	High				High	Low		Incentives, protein autonomy plan
Unsaturated fatty lipids in ration	Medium	Low	Medium	Low		Low	Low	Medium	Access to nutritionist
Feeding additive to mitigate enteric methane	Low		High	High		High	Low	High	Incentive, carbon credit
Regenerative practices for animal feeding production	Medium	High	Medium	Medium	Low	Low	Low	Medium	Incentive, training, carbon credit
Agro-ecological structures	Medium	High	Low	Low	Low	Low	Low	Low	Incentive, carbon credit
Manure management – Biodigester, methanization			High					Medium	Government incentive, carbon credit

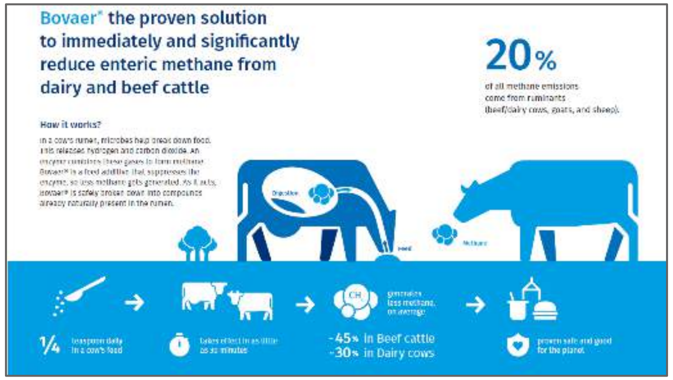
Applicability High Medium Low

3 case studies illustrating Bel milk decarbonization journey

APBO Partnership in France

Develop a unique partnership with French farmers to collaborate on milk carbon footprint reduction

Deployment of Bovaer in Europe



Deploy a feeding additive to tackle enteric methane mitigation

Regenerative Agriculture Promotion in Azores

Onboard Portuguese farmers into RA practices to increase productivity by decreasing inputs

APBO long-term Partnership in France

- New collaboration set-up in 2018 based on:

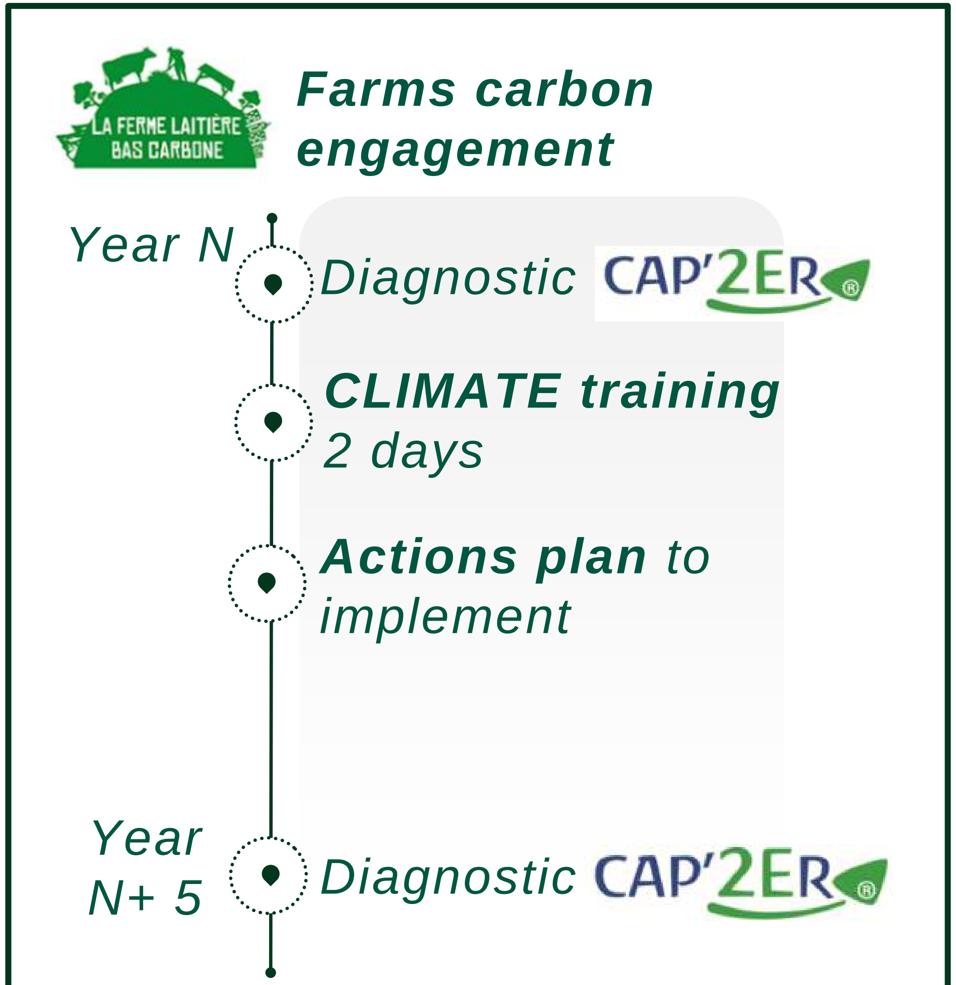
- Annual milk fixed price
- No GM feeding + access to grazing
- Engaged in carbon strategy
- Incentives for grazing and protein autonomy projects

- Review of Bel / APBO collaboration due to crisis in 2022:

- Milk price based on production and labors costs
- No GM feeding + access to grazing
- Engaged in carbon strategy
- Incentives for grazing and protein autonomy projects
- Bovaer study + implementation since 2024

- Key ouputs *(At end of 2023)*

- Farms developing their production capacity
- 100% farms with no GM feeding and pasture access
- 100% farms with a 1st carbon diagnostic, 15% with a 2nd one



APBO farms carbon journey

Deployment of Bovaer® in Europe

PROJECT KEY STEPS

	Nov. 21	July 22	Dec. 22	Jan. 23	May 23	Jul. 23	Jul. 24
Kick off	**Step 1**	**Pilot 1**	**Step 2**	**Pilot 2**	**Step 3**	**Roll-out 1**	**Roll-out 2**
Signature of **Memorandum of Understanding** – Bel & DSM Sep. 21	**CSR Operational Committee** Go pilot in Slovakia	Pilot in 2 farms in Slovakia for 3 months	**COMEX:** GO for deploying in Slovakia	Pilot in 5 farms in France for 3 months	Signature of **Bel / DSM Agreement**	Deployment of Bovaer in Slovakia	Deployment of Bovaer in France


Bel taps enzyme-suppression tech to produce low-methane Babybel

2 years journey till deployment of Bovaer® @Bel

Regenerative Agriculture Promotion in Azores

2022

2022

START

Pilot
X5

TERRAConsultores

4 external consultants
- Grazing
- Nutrition
- Soil
- Seed

2025
Start of scale up

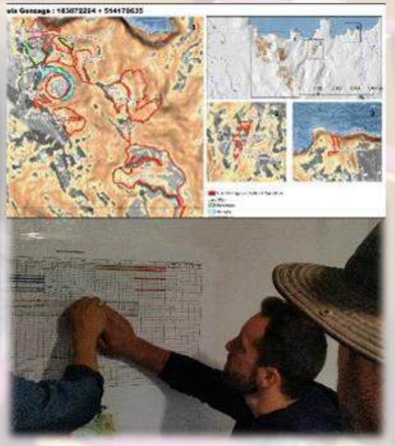
X15

Training, trials & sharing

Practices:
- ✓ Trials in crops & fertilizer
- ✓ Grazing management

Incentives:
- ✓ Training farmers
- ✓ Expertise on the field

Sharing:
- ✓ Sharing to ecosystem (conference)
- ✓ Finding seed & fertilizer supply



2025 and beyond

Success? ➔ Scale up

Implementation & validation
of the pilot practices

<u>Scale up: 2025</u>

X15

Cooperative + Farm organisation
Asking for EU fund

**Highly potential
we support data &
knowledge**

**Difficult to change
eco-system &
find the right support
and supply**

Key Learnings

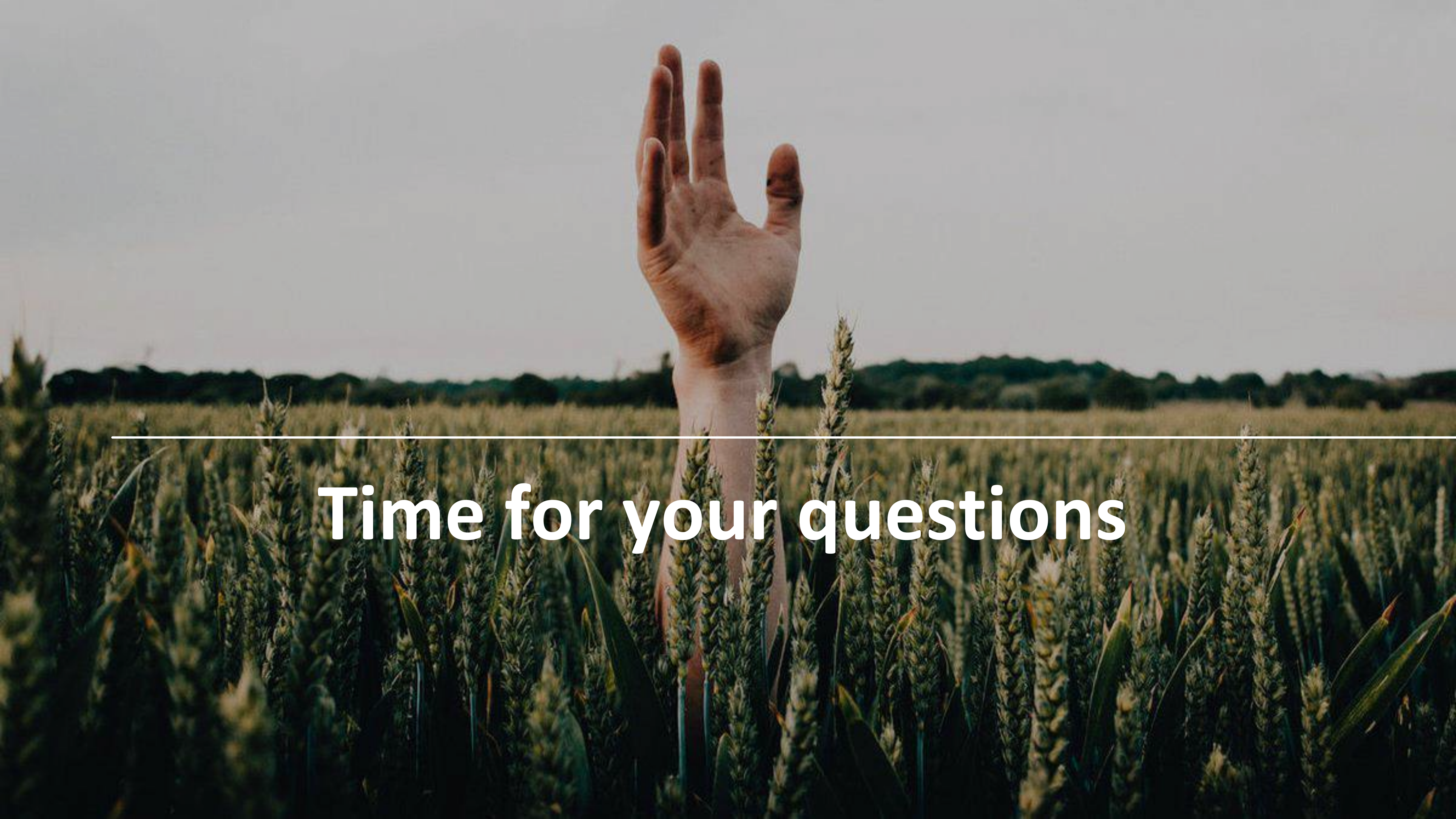
- Data is key to be able to measure and monitor => MRV is mandatory
- High heterogeneity in-between countries and within a country => **not a single solution for all**
- Need for financial and technical support for the farmer to assume the risk during the transition period

Key challenges in front of us

- System financing: who must pay for the transition?
- Indirect sourcing decarbonization: How to work on decarbonization when there is no direct relationships with the farmers?

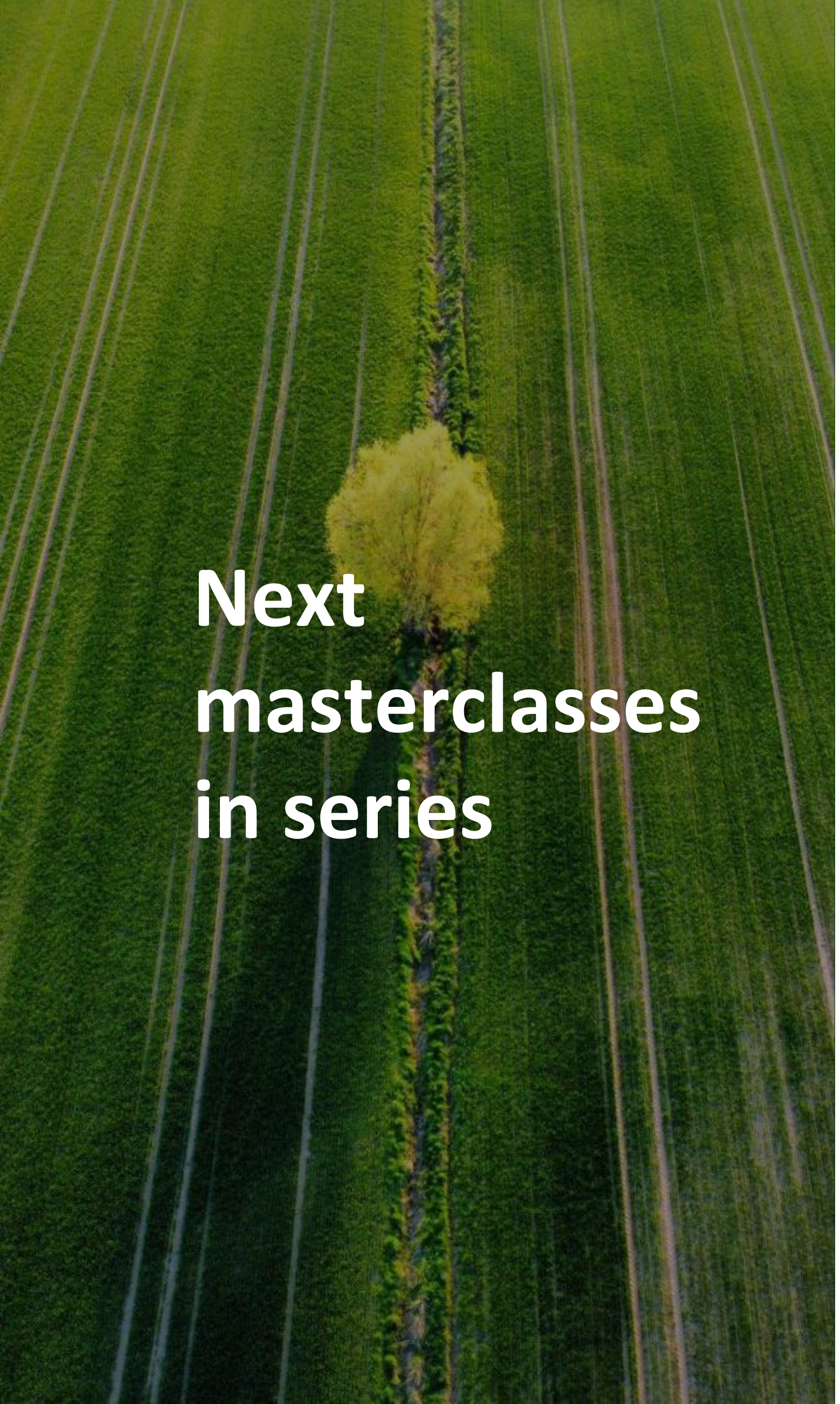
Need for a full support from all value chain actors to finance milk decarbonization => all dairy companies, retailers and consumers

- Include **biodiversity & water management** as key enablers for decarbonization strategy


Time for your questions

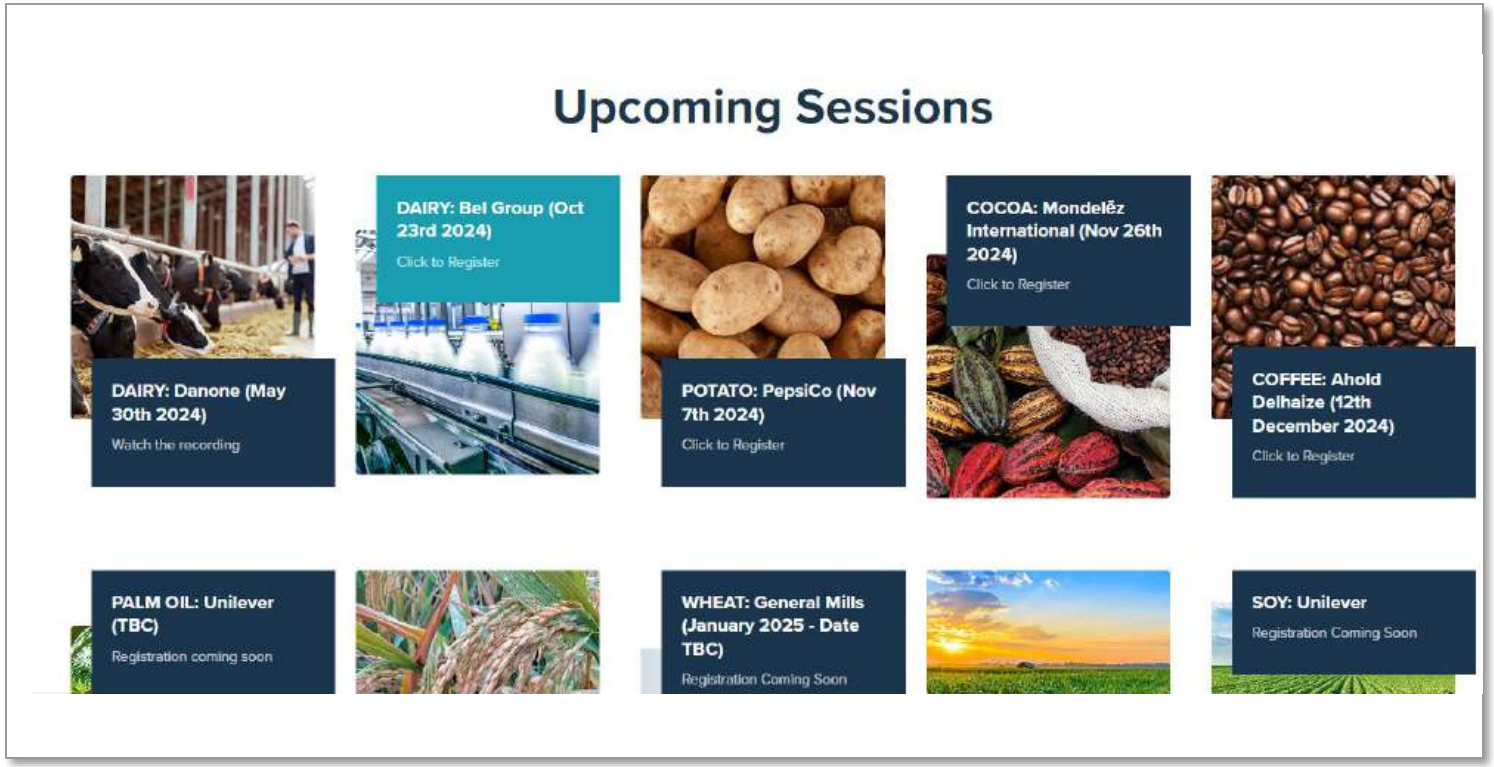
Not recorded – will not be available to the public

Open discussion - Do we see opportunities to partner & scale for impact?



Next masterclasses in series

Stay tuned for our next masterclasses



All information and resources available on CGF website: https://www.theconsumergoodsforum.com/environmental-sustainability/net-zero/key-projects/commodity-captain-masterclasses/

Thank you