EIT FAN CHALLENGE: HOW DO WE RESET MILK’S CARBON FOOTPRINT?
WE BELIEVE THAT MILK PRODUCTION IS A SUSTAINABLE WAY TO PRODUCE NUTRIOUS FOOD AT NORTHERN LATITUDES.
EFFICIENT BIOREACTOR
AT OUR LATITUDE 60°N

SUN ENERGY → GRASS
COW → PERFECT PROTEIN
WE INTEND TO CUT MILK’S CARBON FOOTPRINT TO ZERO

Carbon-neutral milk means that the same amount of emissions is reduced and removed from the atmosphere as is generated on the farms, in transportation, at the plants and in package manufacturing.
THE CARBON FOOTPRINT OF MILK, FROM FIELD TO DINNER TABLE, CONSISTS OF

Milk climate emissions by source (semi-skim milk),

Distribution of semi-skim milk environmental emissions

Source: Valio
VALIO TARGETS AND ACTIONS
HOW DO WE CUT MILK’S CARBON FOOTPRINT TO ZERO?

Smart grass field cultivation binds atmospheric carbon
- Can reduce milk’s carbon footprint by up to 40%*

Manure can be used to make renewable biogas to replace the fuel used in cars and tractors
- Can reduce milk’s carbon footprint by up to 50%*

Direct transportation routes, fully loaded trucks, and renewable fuels

Energy-efficient plants that use renewable energy

Minimising milk and food waste at farms, plants, stores, and at home

Plant-based packaging and other package innovations

*Valio’s own estimate
VALIO’S ACTIONS SO FAR

Carbon farming courses with Baltic Sea Action Group started in April 2019

100% Soy-free feeding saves rainforests, cows eat mainly grass

Biogas and fertiliser from manure, we are building a network for recycling manure and nutrients

First bio gas fuelled milk truck rolled out in February 2019

100% plant-based cartons (yoghurt, milk, sour milk and cream cartons), we are giving up black plastic in 2019
WE HAVE **THREE ROUTES TO THE GOAL IN PROMARY PRODUCTION:**

- we bind more carbon dioxide into grass fields
- we use manure to produce renewable biogas
- we reduce emissions from organic soil
VALIO’S SOLUTION: RECYCLING MANURE INTO BIOGAS AND NUTRIENTS

Phosphorus is a nutrient that plants need. And the world’s supply of it is running out.

We have patented a technology to separate phosphorus and another important nutrient, nitrogen, from manure into fertilizer fractions. This also allows us to produce biogas and clean water. This is a way to return the nutrients in manure to the natural cycle and replace fossil fuels used in traffic with biogas.
VALIO CARBO®
GRASS SEED MIX FOR
CARBON BINDING

We have developed grass mixes that suit our northern conditions and help with carbon binding. Farmers will get their hands on the seeds just before the spring planting.

Five plant species, each with a task: Red and white clover attract pollinating insects and bind carbon. White clover covers up clear patches, improves longevity and prevents weeds. Reed fescue has long roots, and meadow fescue grows quickly after being cut. Timothy is tasty and nutritious to the cows. They are also durable in varied conditions and grow well.
SMART LOGISTICS, SMALLER EMISSIONS

We optimise our milk collection routes and avoid unnecessary runs.

We reduce our product distribution’s environmental load through sharing our distribution with other companies and using fully loaded trucks. In the autumn of 2018, our very first biogas-fuelled truck rolled out of the garage. This February, our first biogas-fuelled milk collection truck rolled out (pictured).
100% PLANT-BASED PACKAGING, BLACK PLASTIC IS THE NEXT TO GO

In 2015, we launched our 100% plant-based packages. Instead of oil, we use bioethanol to make our cartons’ liquid proof plastic film. From early 2019, all of our gabled milk, sour milk, cream and yoghurt will be renewable. The cap can be recycled with plastic. During 2019, we will be giving up black plastic (*moulded-in black through the package)
OUR PACKAGING ACTIONS
50 YEARS OF SUSTAINABLE ACTIONS

1970’s: Started a system for reusable transport packaging in Finland
1990’s: Co-founder in Finland’s package recycling programme – these days, all of our packaging is recyclable, even the plastic ones
1990: All Valio’s packaging recyclable
2000: Cup made of cardboard and a thinner plastic
2010: All gable-top milk, sour milk, cream and yoghurt cartons made of plant-based material
2003: Reusable cup trays
2015: The world’s first 100 % plant-based milk carton
2018: All gable-top milk, sour milk, cream and yoghurt cartons made of plant-based material
2019: Increasing use of plant-based packaging material in juices
2019: Giving up black plastic
2020: ENVIRONMENTALLY SMART PACKAGING CONTINUES Several new projects of sustainable packaging materials coming
2019: Giving up black plastic
CHEESE package made of 90% recycled plastic
1990: Gave up the use of PVC, no hormone disruptor plastics in use

REDUCE REPLACE RECYCLE
VALIO’S EIT FAN CHALLENGE
EIT FAN CHALLENGE: HOW DO WE RESET MILK’S CARBON FOOTPRINT?
* IN PRIMARY PRODUCTION
* IN LOGISTICS AND PRODUCTION
* IN PRODUCTS AND PACKAGES
MORE DETAILED GUIDELINES RELATED TO THE CHALLENGE:

PRIMARY PRODUCTION
Roughly 90% of the carbon footprint in milk products is formed in primary production.
We need
• Tools to measure carbon sequestration in agricultural lands to be able to increase carbon sinks and reduce emissions
• Tools to improve grass farming efficiency and ways to develop market to grass feed

LOGISTICS AND PRODUCTION
We need
• Innovative ways to reduce waste and decrease use of water and energy

PRODUCTS AND PACKAGES
We don’t want
• Applications to measure your fridge content
• Recipes to make meals from left over foods
• Ideas to change all packages to glass bottles

Otherwise we are open for all kinds of new ideas 😊.
Together we can make life better