



Role of grass land and animal feed in high output dairy farming systems

From a dairy chain perspective



With the story of milk we tell our consumers and stakeholders about the natural aspect of milk

Story Of Milk



Our social purpose is aimed at three global challenges

Food and nutrient security for a fast growing world population

Helping small farmers in dairy worldwide (aging farmers is a major issue)

Building more efficient & sustainable food supply chains



Managing sustainable dairy farming is one of the four pillars of our CSR policy

Sustainable dairy farming

Energy and climate



Animal health and welfare



Biodiversity



Outdoor grazing





Grass is valuable for the dairy sector and contributes to:

Image

Iconic for The Netherlands and the Dutch dairy sector



Efficiency in milk production

Cost price is lowest in countries with grass land as a basis

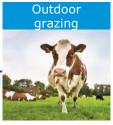


Our dairy farming goals on sustainability









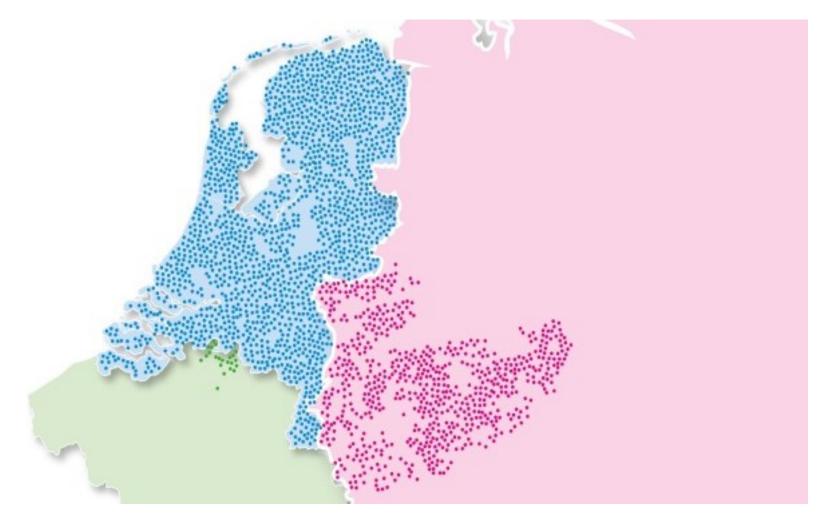
The ability to grow

Within environmental footprint





The Dutch dairy sector is based on holding and milking cows and cultivation of grass

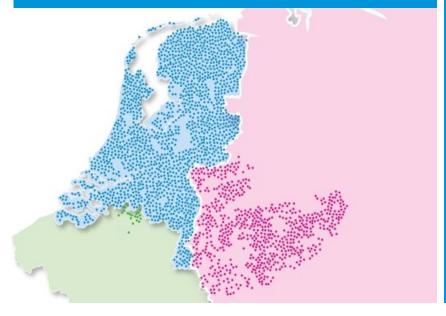




With innovations and craftmanschip of outdoor grazing we can increase grass output

Current

- √ 700.000 hectare grass area
- √ 6 million tons of grass



Possible scenario (+55%)

- √ 700.000 hectare grass area
- □ 9,3 million tons of grass



The challenge is to optimize our usage of grass and use the benefits of outdoor grazing



- ✓ Cows graze their own feed
- ✓ Grazing losses and silage losses can be offset against each other.
- ✓ Labor intensiveness with outdoor grazing and indoor feeding is practically the same
- ✓ Grazed grass saves around 50 to 100 euro per ton dry matter compared to grass silage

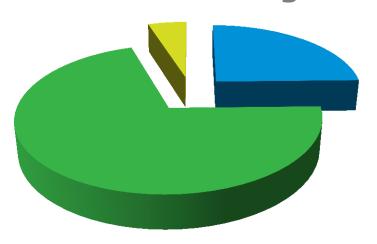


Grass is an important factor that can help the dairy sector reduce carbon dioxide

The dairy sector is committed to carbon neutral growth



Greenhouse gas emissions



- Fossil fuel 1x CO2
- Methane28 x CO2
- Nitrous oxide 265 x CO2



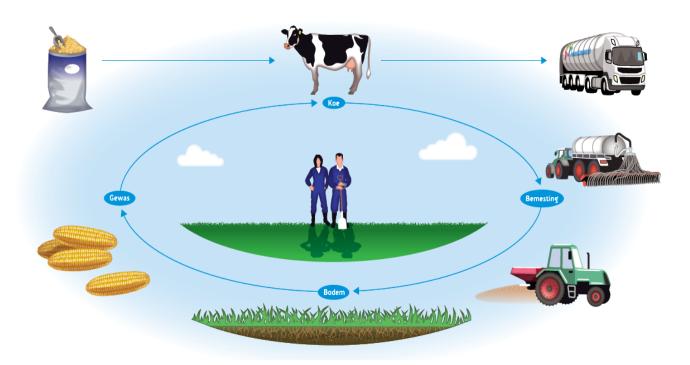
Grass can contribute to animal health and welfare



- ✓ A cow can exhibit her natural behaviour
- ✓ Space for movement
- ✓ Exposure to light



With grass as animal feed we are able to decrease the environmental footprint



More efficiency is needed:

Increase of production of grass and milk with equal usage of nitrogen and phosphate from animal feed and fertilizer

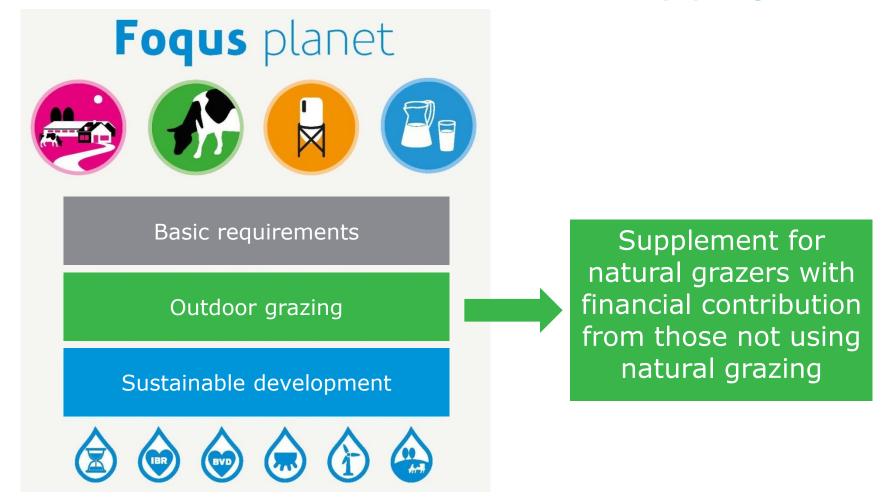


Soil quality increases with long term grass cultivation, and grass output increases with healthy soil



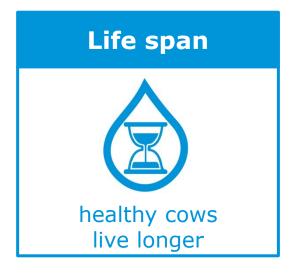


At FrieslandCampina we stimulate outdoor grazing within our sustainability programm



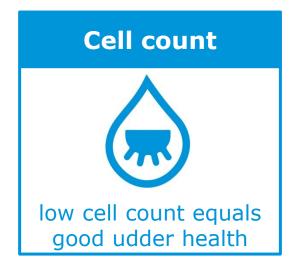


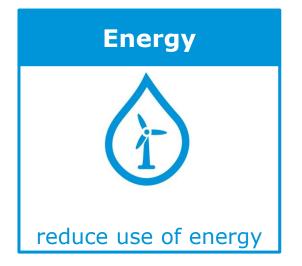
Our dairy farmers work with six KPI's for sustainable development

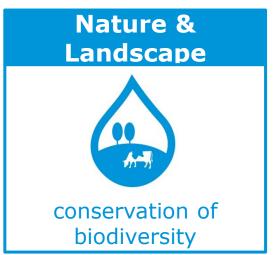














In the dairy sector more than fifty food chain players join forces to stimulate outdoor grazing

The dairy sector in The Netherlands strives to 81% farms that practise outdoor grazing







- Farmer Organizations
- Dairy companies
- Supplyers animal feeds
- Advisors of farmers
- Retail (supermarkets)
- Cheese producers
- CSR
- Environmental organizations
- Government
- Education and science

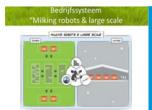








With projects and sharing knowledge and experience we stimulate outdoor grazing with dairy sector wide approach



Projects:

- combination of outdoor grazing and automatic milk system
- 'transfer to outdoor grazing'



Sharing knowledge by experts: farm walks



Innovation



Science and education:

- Professor outdoor grazing since january 1st 2015
- Research to grass and outdoor grazing



The Dutch dairy sector needs more knowledge about optimizing grass production and productivity with maintaining biodiversity

Spearheads for grass cultivation and outdoor grazing

- Increase craftmanship for grass cultivation and outdoor grazing
- Develop management information and tools
- Innovation in soil fertility and grass production
- ☐ Increase grass utilization with outdoor grazing with modern systems (AMS) and large heard of cows



Friesland Campina win



Thank you