

# Grassland and forages in high output dairy farming systems in Flanders and the Netherlands

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# In 50 years

- Average number of dairy cows per farm increased ten-fold, to about 85
- Average milk production per cow doubled to somewhat more than 8,000 kg
- The milk production per ha trebled to about 15,000 kg ha<sup>-1</sup>
- A ten-fold reduction in the number of dairy farms to about 18,000.

*Van Dijk, Schukking, Van der Berg, 2015. Grassland Science in Europe 20: 12-20.*

# What is high output?

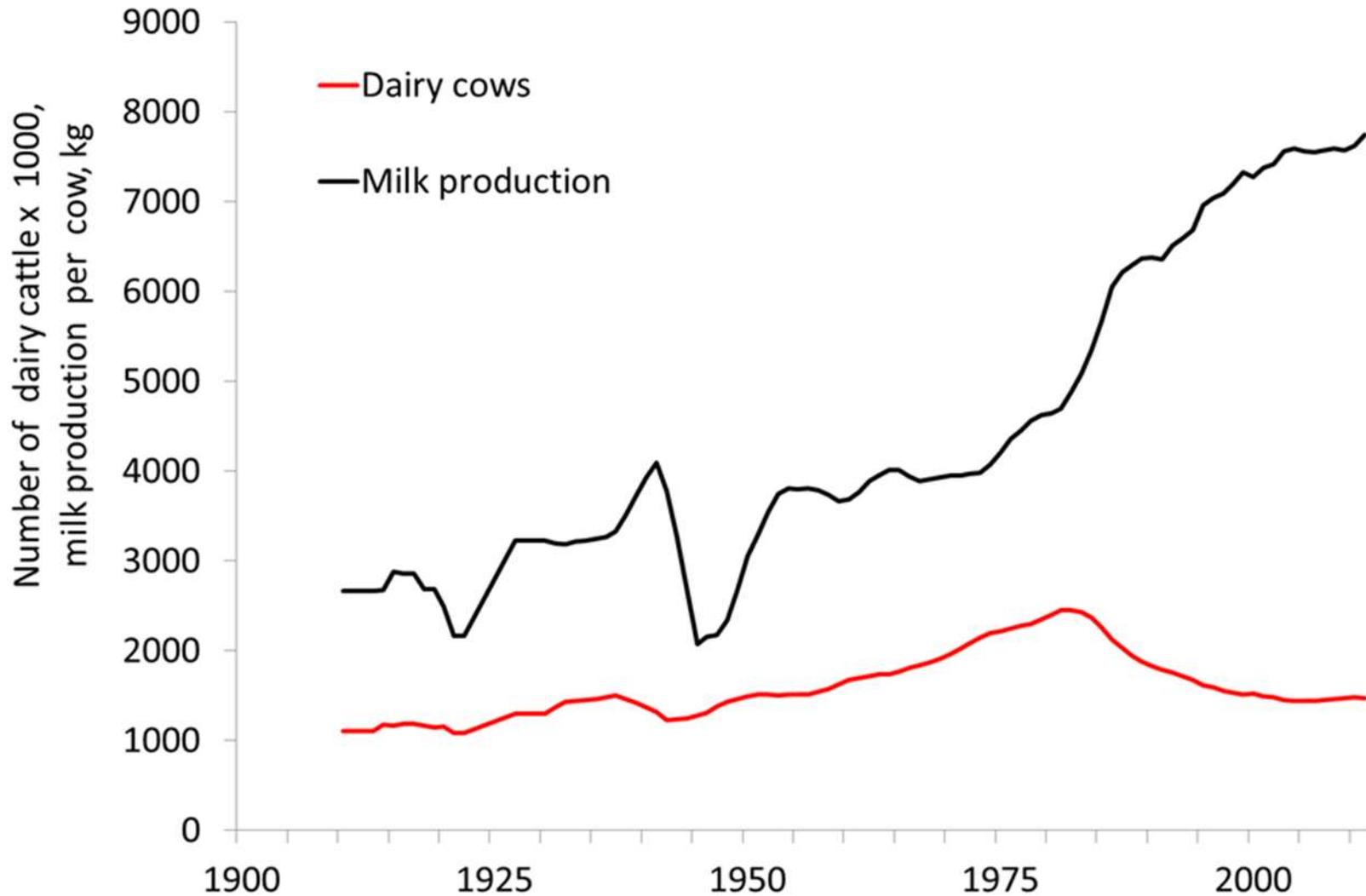
- Different over time
- Different per region



- Milk per cow, per ha land, per farm, per labour unit, per country
- Input and output usually related



# Developments



# Developments



*Source: photo exhibition on developments in forage supply by Rienk van den Berg, Henk van Dijk and Sije Schukking - to be visited on Tuesday during the EGF mid-term excursion*

# Today

- Regional differences in soil quality
- 60% of NL below sea level (-1 to -7m), Flanders above
- Areas above sea level originally mostly poor sandy soils, fertilisation increased soil mineral content
- Average net yield of grasslands 9 – 11 tonnes DM yr<sup>-1</sup>
- Rations characterised by relatively large amounts of supplementation, mainly maize silage, grass silage and concentrates

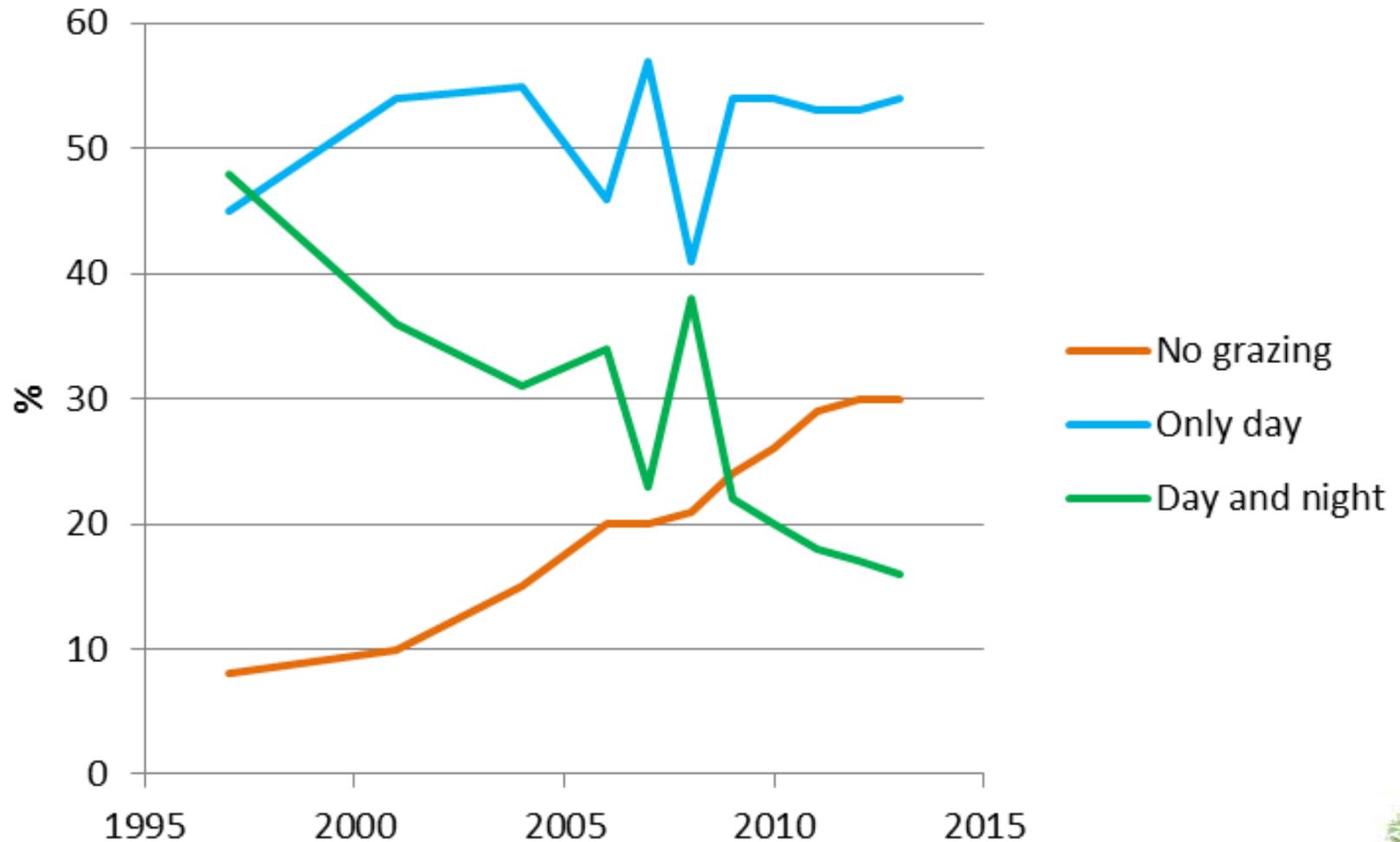
# Examples high output dairy farming in Flanders

(link to video)

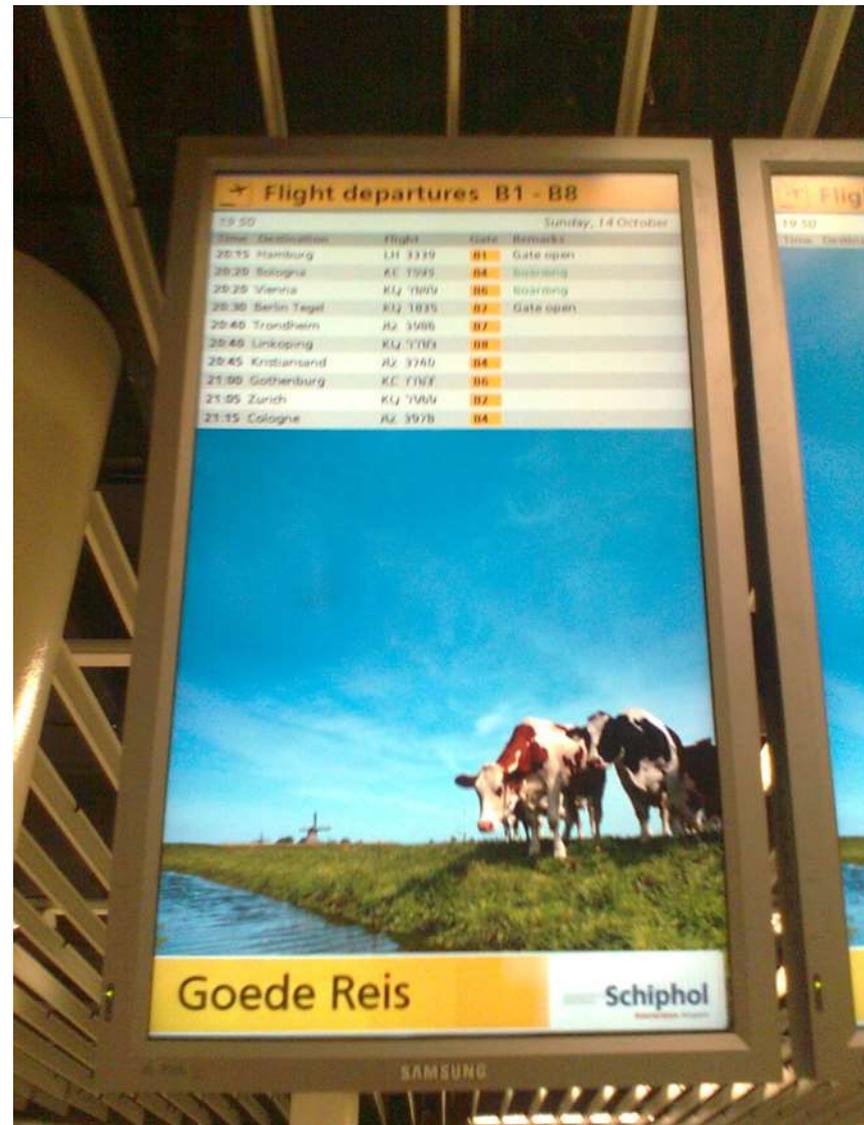
# Problems, solutions, perspectives

- Grazing
- Nutrient losses

# Grazing in the Netherlands



# Society



# the Netherlands

- 2012: “Treaty Grazing”
- Aim: stable number of grazing cows
- ~ 60 parties signed



# Challenges

- Grass intake per individual cow highly variable and not known
- Trends (like larger herds, more AMS) make grazing more difficult
- Milk from grass
- Training advisors / farmers

Handmade  
RESTAURANT



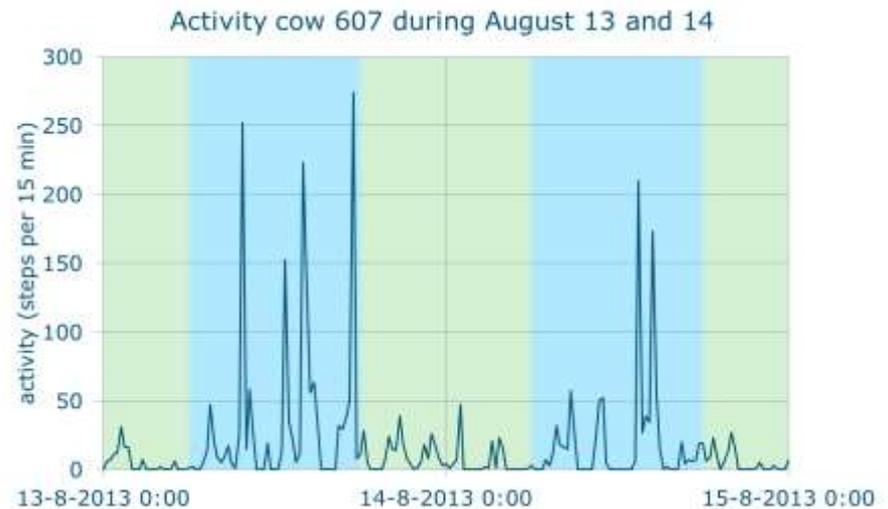
# Solutions

## ■ Automation:

- Drones
- Automatic fences
- Sensors
- GPS tracking of cows

## ■ Basics first!

- Craftsmanship, “new grazers”, milk from grass, economy and labour



# Nutrient losses

# Nutrient losses

- High output dairy farming systems in Flanders and the Netherlands characterised by high fluxes of N and P
- Research to avoid losses to the environment and to increase production efficiency
- Insight into the flow of minerals at farm level
- Practical tools for farmers, e.g. ANCA (Annual Nutrient Cycle Assessment)
- From 2015 onwards, ANCA as licence-to-produce

# ANCA

- (link to video)

# Conclusion and outlook

# Conclusion and outlook Flanders and the Netherlands

- Many challenges and constraints
- Solutions tailor-made
- Further scaling and intensification
  - High soil fertility
  - Favourable weather conditions
  - Good infrastructure (roads, harbours)
  - Well-educated farmers

Thank you !

