Social and economic impacts of grass based ruminant production

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The menu

Developments in grass based ruminant production systems
The multiple benefits of grasslands to society
Farm economy - traditional
Societal initiatives
The farmer as a focal point
New perspectives farm economy
Conclusions
Permanent grassland area in Europe
Fraction of the total agricultural land area

Smit et al., 2008
Grasslands under threat

- Grassland area has been significantly reduced
- Causes are (EU MAES initiative):
  - Conversion into crops like maize (32% lost area)
  - Sprawl of urban areas, economic sites and infrastructures (30%)
  - Withdrawal from farming (17%)
Grazing under threat
EGF Working Group ‘Grazing’

Surveys since more than a decade
• Opinions and thoughts
• Research results

Estimate of % dairy cows grazing
• Mainly ‘educated guesses’
Grazing in Europe

In general, the popularity of grazing is declining
Country specific
East and South ◀ North and West
Two contrasting trends occurring simultaneously in Europe

**Management intensification**: In some regions, ruminant production systems have intensified leading to more animals per ha grassland and less grasslands

  e.g. Germany and Denmark

**Abandonment**: In other regions, grasslands have been abandoned and the percentage of the population that lives from grass based ruminant production has decreased

  e.g. Galicia
Is this a problem?
Grass based ruminant production systems deliver multiple benefits to society
Grazing
Animal welfare
Low cost
Aesthetic value
Carbon sequestration
Biodiversity
High quality fodder

F A R M E R

S O C I E T Y
What do others think?

MultiSward survey among European stakeholders (Van den Pol-van Dasselaar, Goliński, Hennessy, Huyghe, Parente & Peyraud, 2014)

Important / very important functions of grasslands according to stakeholders:

• Grazing animals
• Animal production of high quality (especially milk)
• Biodiversity
• Beauty of the landscape
If maintaining grass based ruminant production systems is important

Farmers are key actors since they decide on the day to day management of the farm

If farmers are expected to maintain the grasslands, it is an essential condition that they will have a reasonable income
Farm economy, the “old” model

Low-cost strategy!

Income farmers based on:
- Price animal products
- Subsidies / direct payments
- Costs for producing animal products
Grass based ruminant production as a low-cost strategy: more grass in the diet leads to lower costs

Dillon et al., 2005
Grass based ruminant production as a low-cost strategy

Different opinions

Some say yes

Others say no

• Not achievable in some areas due to farm / pedoclimatic conditions
• Intensification leads to less grazing
• Perceived as impossible by some farmers
Farm economy, the “old” model

- Grass based is a low-cost strategy
- But not suitable for all regions of Europe
  - Satisfactory conditions to focus on grass are lacking (farm conditions like slopes, pedoclimatic conditions leading to short growing seasons)
- Tendency for intensification
- Assumed benefits are perceived as impossible
- The old model (with assumption that grass based is profitable and automatically preferred) does not longer work for maintaining grasslands
New perspectives
Societal initiatives to stimulate grass based ruminant production

- Treaties
- Premiums
- Market concepts / differentiation of products
18 June 2012 – Treaty on Grazing in NL

Grazing cow as part of the cultural heritage
Aim: to stabilise the percentage dairy farms that practice grazing
>80 organisations in the dairy chain
German ‘Grazing Charta’
Premiums - examples

• For grazing (e.g. Netherlands, Germany, Luxembourg)
• For delivering ecosystem services (e.g. Switzerland, Portugal)
Carbon Fund in Portugal

Project Sown Biodiverse Pastures
Project Terraprima/FPC 2009-2014

Sequestro de carbono em pastagens semeadas biodiversas ricas em leguminosas - Programa de apoio a projectos no país.

19,08 hectares

Teixeira, Proença, Crespo, Valada & Domingos, 2015
Market concepts / special products

Marketing of meat and dairy
Market concepts / special products

- Quality of animal products determined by management (Coppa et al, 2017)
- Authentication
- Traceability
The importance of the mind-set of the farmer

Farmers are key actors since they decide on the day to day management of the farm
Mind-set and behaviour

Theory of Planned Behavior

Attitude

Subjective Norm

Intention

Perceived Behavioral Control

Behavior

Ajzen, 1991
Mind-set of the farmer

Motivation and attitude consistent with the choices made

- **Switzerland** (Baur, Dobricki & Lips, 2010)
- **Netherlands** (Van den Pol-van Dasselaar, Philipsen & De Haan, 2016)
- **Denmark** (Kristensen, Madsen & Noe, 2010; Becker, Kayser, Tonn & Isselstein, 2016)

Farmers try to avoid cognitive dissonance

- change of opinion
- change of behaviour
- change of perception (Festinger, 1962)
Importance of people/items on decisions with respect to grasslands

Van den Pol-van Dasselaar & Carlsson, 2018
Drivers and barriers

Top 3 barriers to innovation (Van den Pol-van Dasselaar & Carlsson, 2018):

• Money
• Labour
• Laws and regulation

Top 3 drivers for innovation:

• Money
• Labour
• Animal welfare
Farm economy, the old model

Income farmers based on:
- Price animal products
- Subsidies / direct payments
- Costs for producing animal products
Farm economy, the new business model

- Ruminants
- Grasslands
- Farm

Animal products
Ecosystem services

Income farmers based on:
- Price animal products (bulk production)
- Subsidies / direct payments
- Higher prices for special products
- Premiums
- Costs for producing animal products
Conclusions

• Grass based ruminant production systems provide multiple benefits to farmers and to the whole society
• There are promising new business models where farmers are financially rewarded for the added value
• Further development of these business models will shape the future of grass based ruminant production systems and will lead to sustainable development of grass based ruminant production
• Don’t forget:
  • Farmers are key actors – mind-set important
  • Special attention for young farmers
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