

# GrasGoed

## In English: GrassGood

# Wetland management as part of a circular economy (2016 – 2020)

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### Partners



### Steun



## Natuurpunt

largest private  
nature conservation organisation  
in Flanders



### Managing about 25,000 ha Flemish nature

- 10,000 ha of grasslands

### Management only possible together with

- 6,000 volunteers
- 250 professional terrain workers
- More than 900 cows (Galloway),  
200 horses (Konik) and 300 sheep
- 800 local farmers



# Wetlands management **from waste to resource**

**Wetlands** e.g. wet meadows, reedland, wet heathland and peatland

## Yearly mowing regime

- Optimise vegetation after restoration (e.g. rewetting of peatlands)
- Continue cultural-historical hayland management to maintain typical biodiversity



If possible Natuurpunt uses grass as **fodder**

- In wetlands technical difficult to dry the grass
- Locally used as compost

If not able to use locally considered **waste**





# Aim to use grass clippings as raw material for sustainable products

## Possibilities

- Use of grass fibres for paper and insulation material
- Use of proteins for animal feed

## ≠ Paludiculture

- Nature management goals and biodiversity stay top priority
- Harvesting methods are adjusted to the extent possible



# Together with 11 partners in Flanders (Belgium) and The Netherlands



# From Grass to Good – strengthen every link in value-chain

- Inventory of amount of grass clippings
- Improving the mowing and transporting machinery
- Improving the processing machinery: from grass to semi-finished product or end product
- Creating prototypes and market pull

While working on the different links, we kept overall focus on the **economic feasibility** of the chain.

Based on cost-benefit analysis and limited value of grass clippings

- Limit transport to distances up to 100 km
- Focus on small-scale processing (approx. 5,000 tonnes/year)

# Inventory of potential

In total for Flanders and province Noord-Brabant

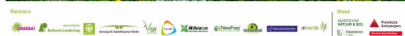
**81.000 ton dry-matter/year**

**= about 250.000 ton fresh grass clippings**



## Rapport GrasGoed

Inventarisatie en economische analyse biomassastromen Vlaanderen en Noord-Brabant



| Gebied                                 | Gras (ton ds/jaar)   |                       |
|--|----------------------|-----------------------|
|  | Technisch potentieel | Economisch potentieel |
| Rivierenlandschap                      | 9275                 | 3710                  |
| Grenspark                              | 3250                 | 1300                  |
| Dommeldal en Vallei van de Zwarte Beek | 4395                 | 1760                  |
| Noord-Brabant                          | 105.000              | 42.000                |
| Vlaanderen <sup>#</sup>                | 74.000               | 39.000                |

Report on [grasgoed.eu](http://grasgoed.eu)



# Improving mowing machinery

In wetlands use of specialized low ground pressure rubber tracks machines

3 main criteria

- Higher efficiency in mowing and removing the clippings from the terrain
- Optimising the quality of the grass clippings for further processing
  - Cut grass while picking it up (max. length 20 cm)
  - Adjust cutting height to avoid too much sand in the grass
- Protecting fauna and flora is a priority
  - ! Limiting soil damage





# Improving transporting and pre-treatment

## Collecting to central locations

- Developed machine to travel between wetland and central locations

## Criteria

- Make grass clippings available all year round
- Dry-matter content not more than 40%
- Stabilising grass, prevent from decomposing

## Importance of silage

## Tested different silage techniques





# Improving the processing machinery

## Processing from grass to semi-finished product

### Testing different grass clippings

- Difference in vegetation types, grass length after mowing, dry-matter content
- Both fresh as ensiled grass



# From semi-finished product to end product (prototype)

- Prototypes of sustainable biobased products
  - Insulation material and grass paper
  - Animal feed
- Creating market pull





# Conclusions and recommendations

- Invest in **smart logistic approach** of supply and demand
- **Incentives** for sustainable products affecting **entire value chain** and promoting collaboration
- Role of **suppliers**
- **Customer awareness** on sustainable products that support nature restoration and management
  - Biodiversity
  - Climate buffer

Thank you!  
Any questions?

Check [www.grasgoed.eu](http://www.grasgoed.eu)  
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