



Agriculture is part of the solution

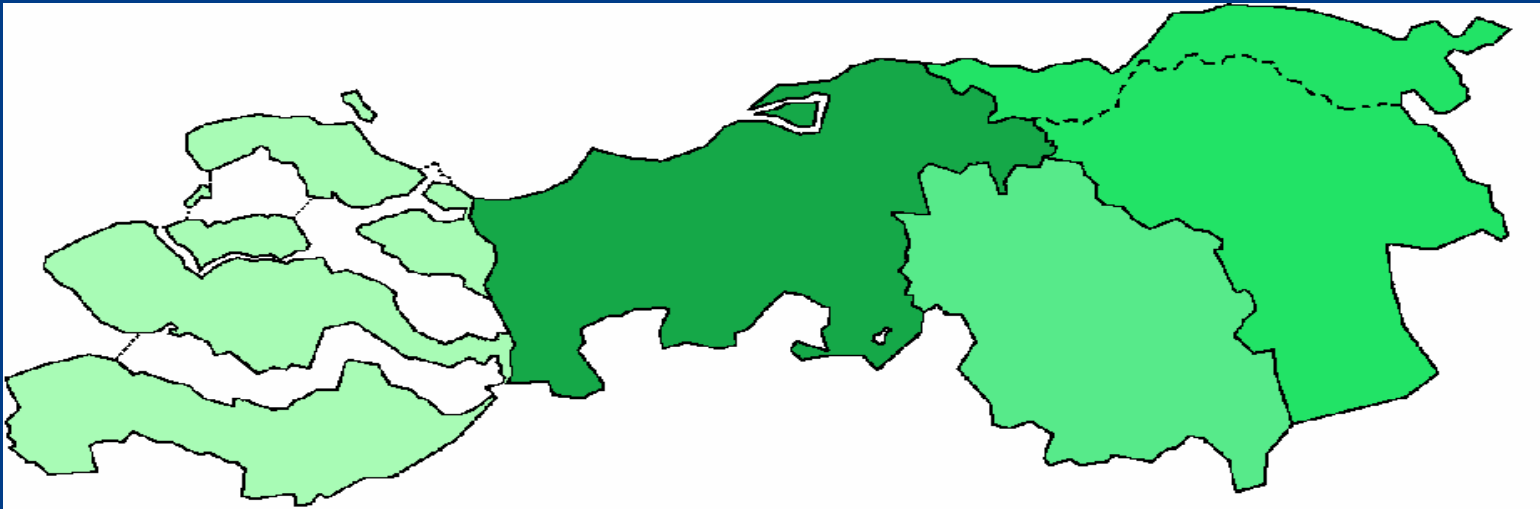
Hans Huijbers

chairman of the ZLTO

International Energy Agency (IEA) - Bio Gas Congress
's-Hertogenbosch the Netherlands - 4 November 2010

ZLTO founded in 1891

- 10,000 members from the profession
- provinces Brabant, Zeeland & Zuid Gelderland
- 65 local departments, 700 active board members





ZLTO Mission Statement

- **ZLTO supports its members that operate in the green space in realising a sustainable perspective**

Supporting members ZLTO

- Collective promotion of interests
- Individual member service
- Projects
- Investment and participation

ZLTO vision

Link in the agri food complex

- of interest to the province of Brabant:
 - o 110,000 jobs (70,000 FTEs)
 - o 13,000 businesses in the primary sector
 - o 1,000 business within the agri food complex
 - o 22% of Dutch exports
 - o 75% of the agri food production for export

Working towards

Sustainability is a process

- Demanding an integrated approach
- Addressing the following aspects of cattle-breeding:
 - o Environment
 - o Health
 - o Animal well-being
 - o Completing cycles
 - o Market and economy

Working towards sustainability in cattle-breeding

Ambitions of the ZLTO

- Overall sustainability in cattle-breeding with closed cycles at the lowest possible levels of scale
 - Reduction of greenhouse emissions
 - Upgrading the value of manure and minerals
 - Further regionalisation of feed, food, energy

Figures and Facts

What's the question?

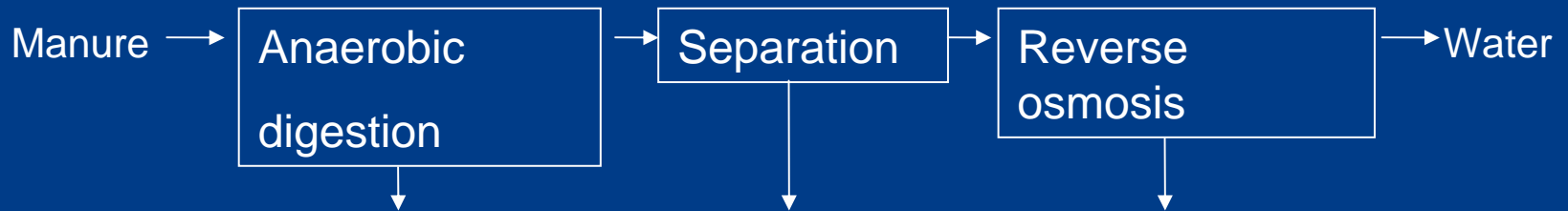
- 175 million kilos of phosphate produced
- 125 million kilos of phosphate can be accommodated (2015)
- 50 million kilos of phosphate in excess
 - o Feed
 - o Export
 - o Processing

ZLTO opts for upgrading value

About upgrading value

- Minerals for plant-growing
- Recycling, upgrading residual currents
- Renewable minerals are raw materials
- Regional production of green energy
- Transition towards a bio-based economy
- Utilising innovation

the approach of ZLTO



Output	Power Heat Green gas	Solid fraction	Liquid fertilizer (N and K)
Revenues	Renewable energy Production Reduction Greenhouse gases	Less transport P-recycling Input bio-based economy	Nutrient recycling Water re-use

Upgrading manure and minerals

A step in sustainability

- Linking up agriculture with society
- Decreasing dependence on raw and ancillary materials
- Creating a local regional economy

Upgrading manure and minerals

What opportunities are implied?

Annual manure production 70 mln. tonnes
(slurry)

- 175 mln. kgs phosphate, 500 mln. kgs nitrogen
- 1,750 mln cbm bio gas, equivalent to 1,172 mln cbm natural gas
- 2 megatonnes (mln) less CO₂ emission
- Considerable decrease in fertilizer use

What is required for this?

- Robust intervention in chain
- Breakthrough in upgrading
- Financial support
- Policy room in fertiliser legislation:
better implementation of the Nitrate Directive
- Access to the energy grid

What are the bottlenecks?

- Concretization of the Nitrate Guideline or/and Fertiliser Guideline
- Manure surplus, decrease of fertility of the soil
- Legislation regarding the use of liquid fertilizers made out of manure
- National subsidies (SDE-scheme for the promotion of sustainable energy)
- Processing of thick/solid manure components

In summary

- We would like (and would be able) to play an important role creating a sustainable society
- We have the experience and the resources
- Anaerobic digestion is part of the solution towards sustainable agriculture
- Government: you are holding the key
 - Room in mineral (fertilizer) legislation and financial support



Thank you