

# Baltic Forum for Innovative Technologies for Sustainable Manure Management Baltic MANURE

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# Baltic MANURE (BatMan) Project

- **Baltic MANURE is a Flagship project in the Action Plan of the EU Strategy for the Baltic Sea Region adopted by member states in 2009**
- **The project is financed by the European Union's Baltic Sea Region Programme 2007-2013**

**Lead Partner: MTT Agrifood Research Finland**

**Total budget: 3.7 million €**

**18 partners from 8 countries (+ Russia and Norway associated)**

**Duration 2010 - 2013**



Part-financed by the European Union  
(European Regional Development Fund and  
European Neighbourhood and Partnership Instrument)



# Baltic MANURE - Partners

1. **MTT Agrifood Research Finland (Lead) (FI)**
2. **Finnish Environment Institute (FI)**
3. **Agro Business Park A/S, Innovation Centre for Bioenergy and Environmental Technology (DK)**
4. **Aarhus University, DK**
5. **University of Southern Denmark, DK**
6. **JTI - Swedish Institute for Agricultural and Environmental Engineering (SE)**
7. **Julius Kühn-Institut, Federal Research Centre for Cultivated Plants (JKI) (DE)**
8. **Estonian University of Life Sciences (ES)**
9. **University of Rostock (DE)**
10. **Green Federation GAJA (PI)**
11. **University of Helsinki, Department of Agrotechnology (FI)**
12. **University of Gdansk, Pomeranian Center for Environmental Research & Technology (PL)**
13. **Latvia Agricultural University (LV)**
14. **Lithuanian Research Centre for Agriculture and Forestry (LT)**
15. **Innovation and Education Centre Hohen Luckow IBZ, German Biogas Association Mecklenburg-Vorpommern (DE)**
16. **LTC AB/Enterprise Europe Network (SE)**
17. **Turku Science Park Ltd (FI)**
18. **Estonian Research Institute of Agriculture (EE)**

## **OBJECTIVE to turn manure problems into business opportunities by:**



- Bringing together stakeholders and enhancing knowledge
- Stimulating technology and business development
- Providing useful policy recommendations
- Improving manure handling and use in the Baltic Sea region



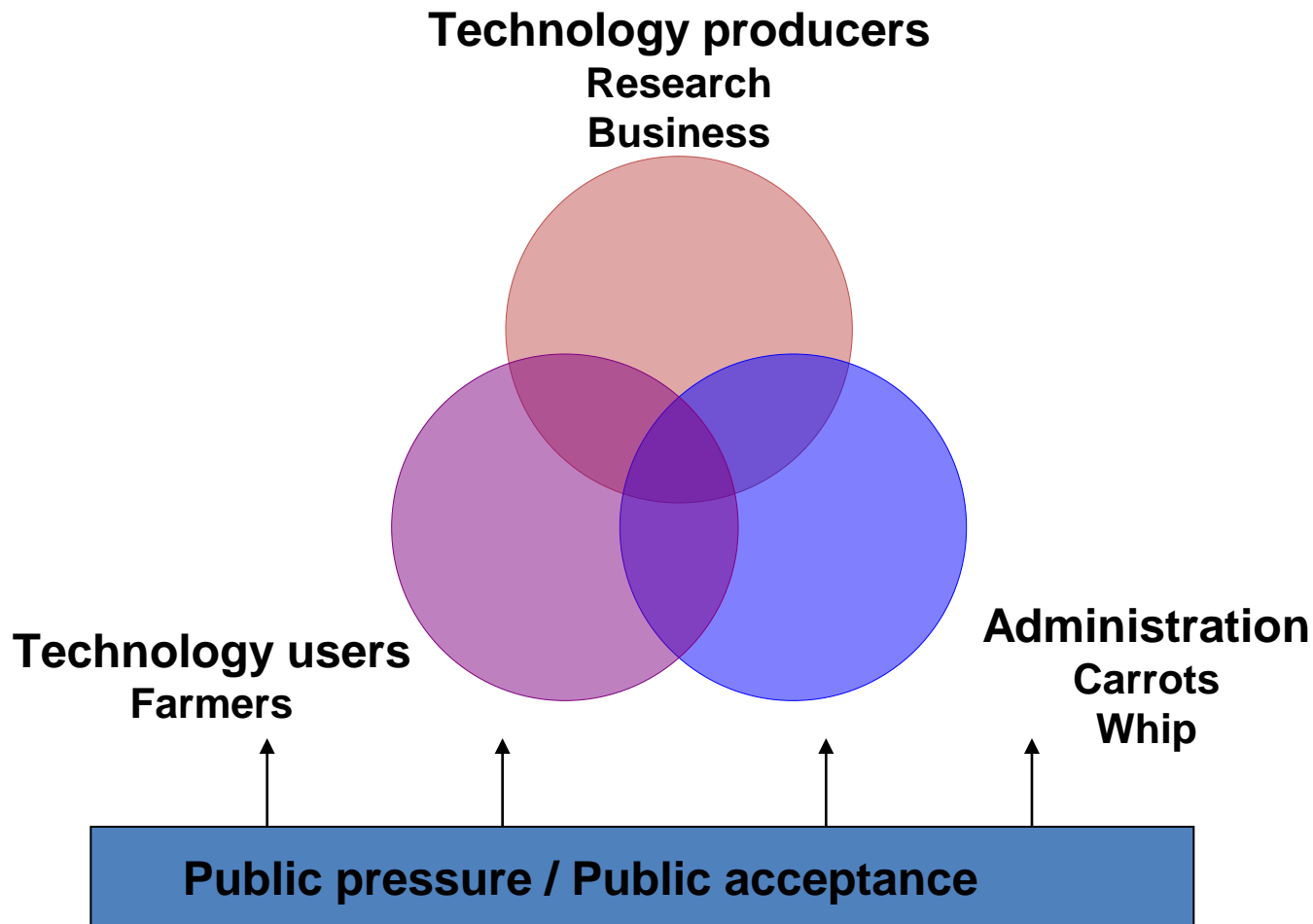
# Baltic MANURE - Objectives

“Turning manure into business opportunities”

- To establish a **manure knowledge forum** by transnational R&D efforts, communication and business innovation
- To evaluate the existing systems and **technologies for animal housing and manure processing** in the Baltic Sea Region
- To evaluate the existing norms for manure in relation to housing and technologies to **reach sustainable nutrient cycles**, with a special emphasis on phosphorus
- To perform **sustainability analysis** of new technologies
- To identify and analyse the **commercial potentials** of manure technologies, e.g. for energy purposes
- To evaluate the **structure of incentives** and national interpretations of EU directives influencing the development of inventive manure processing technologies
- To stimulate **business innovation** for manure technologies and to recommend specific investments

# Baltic MANURE

## Manure Knowledge Forum



- **Baltic Manure logo and website ready**
  - [www.balticmanure.eu](http://www.balticmanure.eu)
  - Three fora established:
    - Knowledge forum, Business Forum, Policy forum
      - Events, press clips, news etc
- Internal communication - Intranet
- External communication
  - Newsletter
  - Conference planned: Compass, Manure & Deal
    - November 2-3 2011 Stockholm



## Innovative technologies for manure handling (JTI) and energy recovery (MTT)

- Survey of manure handling systems on large-scale animal farms in the BSR (> 2000 pigs, 300 milking cows, 40 000 poultry)
- Determining farm-level manure properties in BSR and their suitability for different processing technologies
- Evaluation of innovative manure handling and processing technology
- Assessment of bottlenecks that keep farmers from using manure as a fertilizer resource in BSR
- Overview of energy production technologies for manure; reports on biogas technology, incineration and thermal gasification to be published on project website soon
- Calculation of energy potentials for manure in BSR countries and comparisons to the targets on renewable energy

# Nutrient recycling, phosphorus

P-Management on farms must not cause severe P deficiency in plants, nor excessive P loads to soils.



Macroscopic P deficiency in maize  
(photo: J. Schick)



The highest surplus in the P balance  
show livestock farms (photo: E. Schnug)

# The phosphorus challenge



**Baltic Manure for 100% zero!**

- No P surplus with fertilisation
- No avoidable P losses
- No non-plant available P species in fertiliser products

- Establishment of company contacts underway
- Promotion of the project in general to companies
- Introduction of the Baltic Manure Handling Award (in the Nov 2-3 conference)
- Planning of a seminar in November about the current situation for manure handling technologies in Poland
- Information gathering and writing of country specific manuals describing market conditions in Estonia, Poland and Germany
- Planning of local field visits and seminars relevant to the development of manure handling technologies
- WP – leader: Anne-Luise Skov Jensen, [alsj@agropark.dk](mailto:alsj@agropark.dk)

# Baltic MANURE

## Manure Knowledge Forum

