



HELSINGIN YLIOPISTO



EUROPEAN UNION  
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INVESTING IN YOUR FUTURE



# Energy Positive Farm - ENPOS

Indirect energy consumption  
Fertilizers, chemicals, buildings

ENPOS Seminar - Energy use in plant production – Otepää 20 – 22 January 2010

# Conclusions

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- ▶ Data from energy use and emissions in fertilizer, pesticide and lime production is available
- ▶ Reliability of the data is hard to evaluate
- ▶ Advisable sources:
  - ▶ Edwards, R., Larivé, J.-F., Mathieu, V. & Rouveiolles, P. 2006. Well-To-Wheels analysis of future automotive fuels and powertrains in the European context. Well-To-Tank Report, Version 2b, May 2006.
  - ▶ Kaltschmitt, M. and Reinhardt, G. A. 1997. Nachwachsende Energieträger. Grundlagen, Verfahren, ökologische Bilanzierung.
  - ▶ [www.nnfcc.co.uk/metadot/index.pl?id=2461;isa=Category;op=show](http://www.nnfcc.co.uk/metadot/index.pl?id=2461;isa=Category;op=show)

# Some general remarks about energy use for construction of buildings

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- ▶ In plant production buildings are needed as storage for production supplies and for products, and for drying and upgrading the yield
- ▶ Many different methods to analyze energy need for construction of buildings
- ▶ Analysis is many times based on the mass of construction materials
- ▶ More information and recommendations about this topic on next course in February