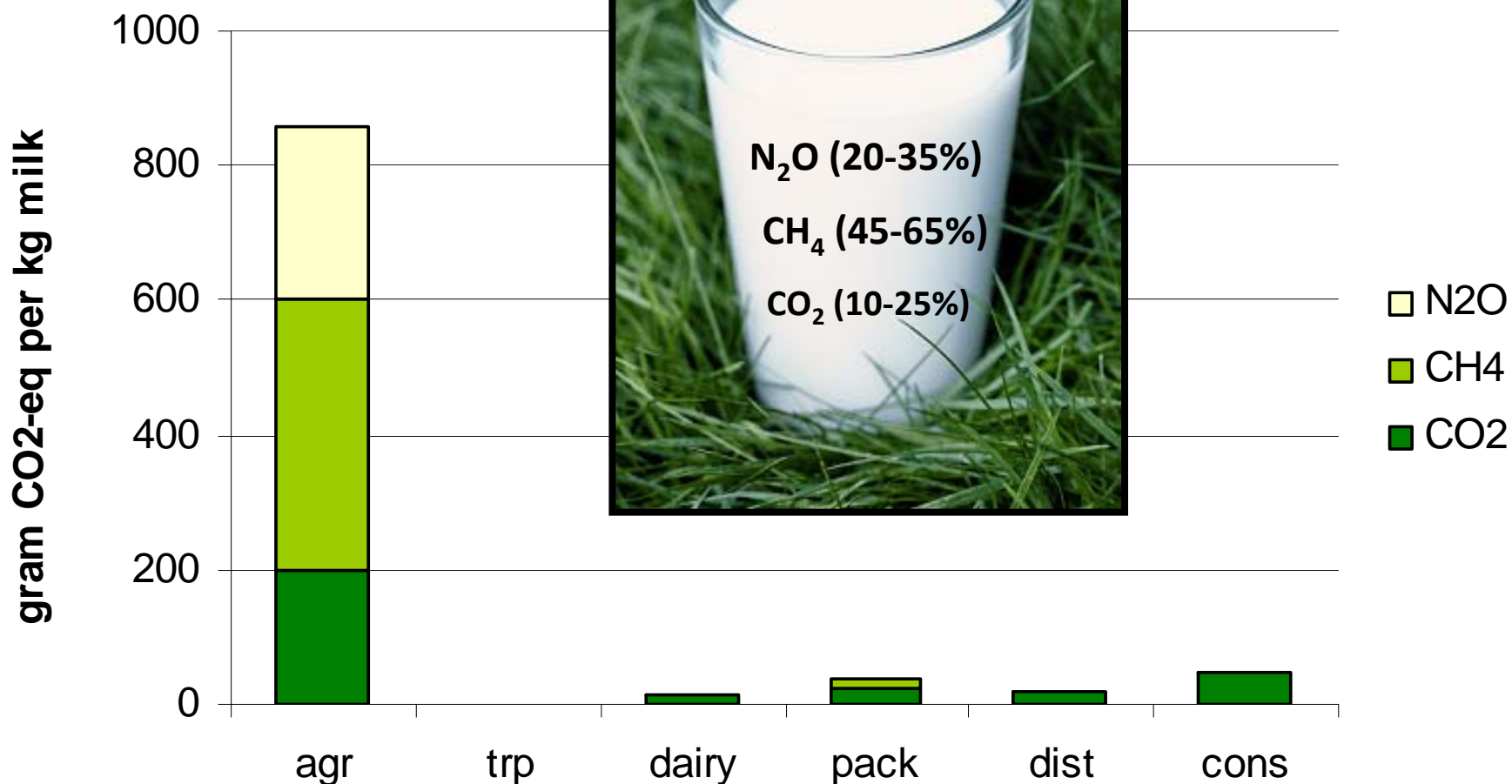
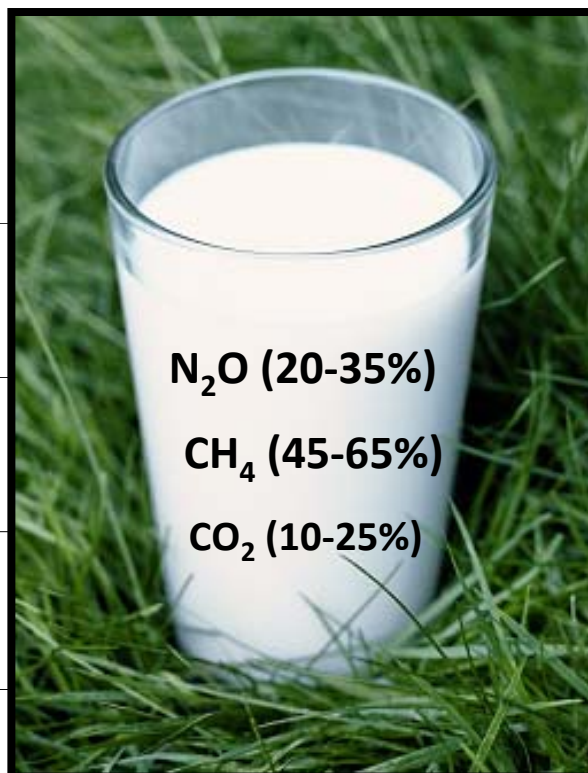




Carbon footprint and labelling of dairy products

- challenges and opportunities

Anna Flysjö, Arla Foods
Christel Cederberg, SIK
Jan Dalsgaard Johannesen, Arla Foods



source: Maten och miljön, LCA av sju livsmedel, 2002



Challenges

- handling of co-products
- emission factors
- obtaining "relevant" data

Opportunities

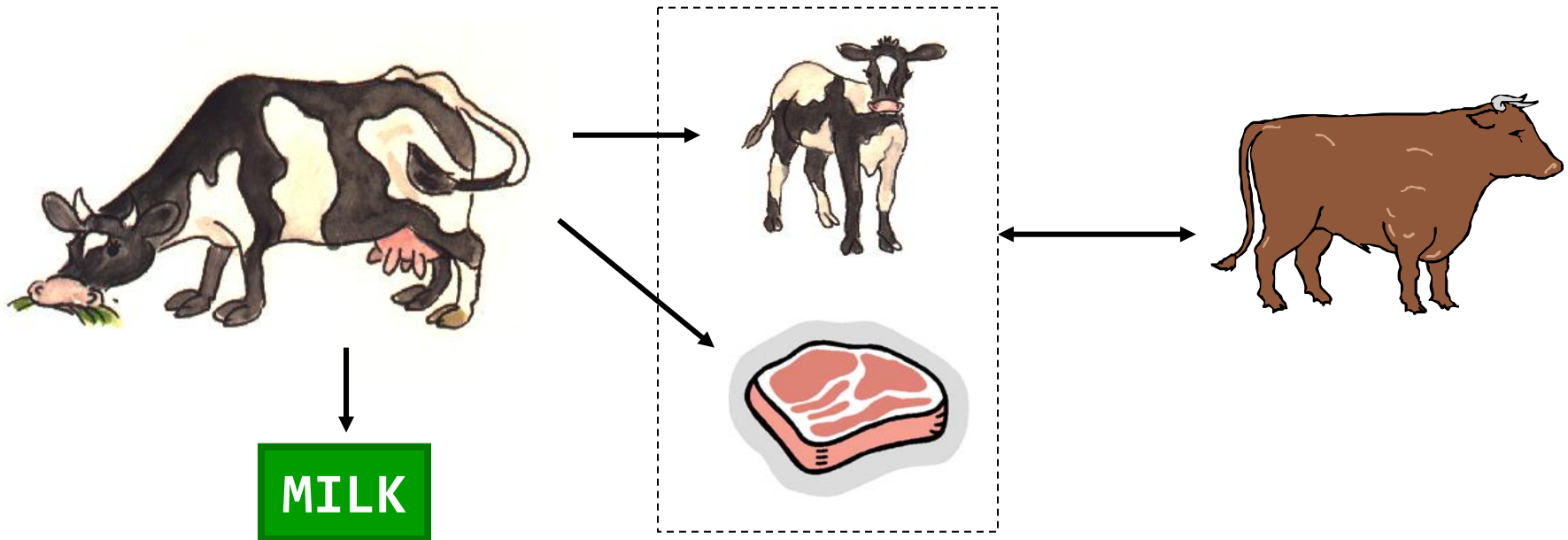
- example of the dairy company Arla Foods

Handling co-products in LCA



✓ dividing processes into sub-processes

✓ system expansion

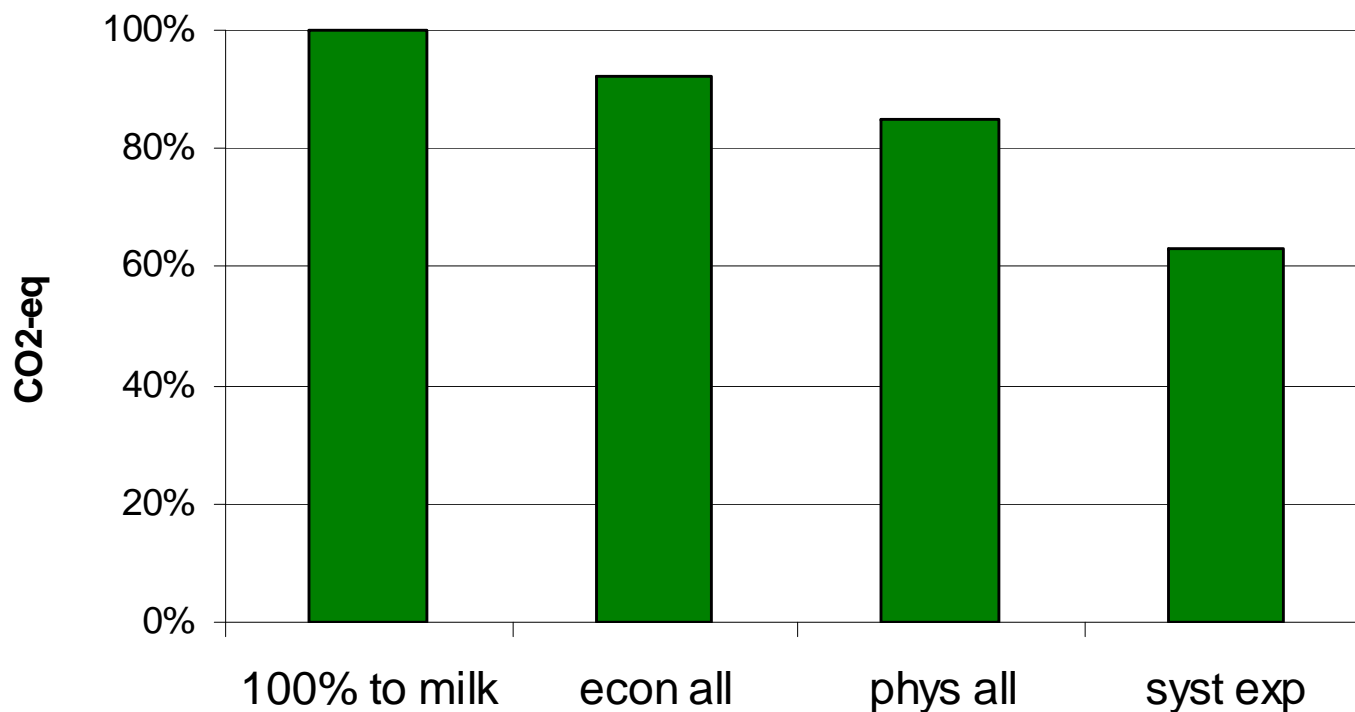


✓ allocation

- physical relationship
- eg economic value



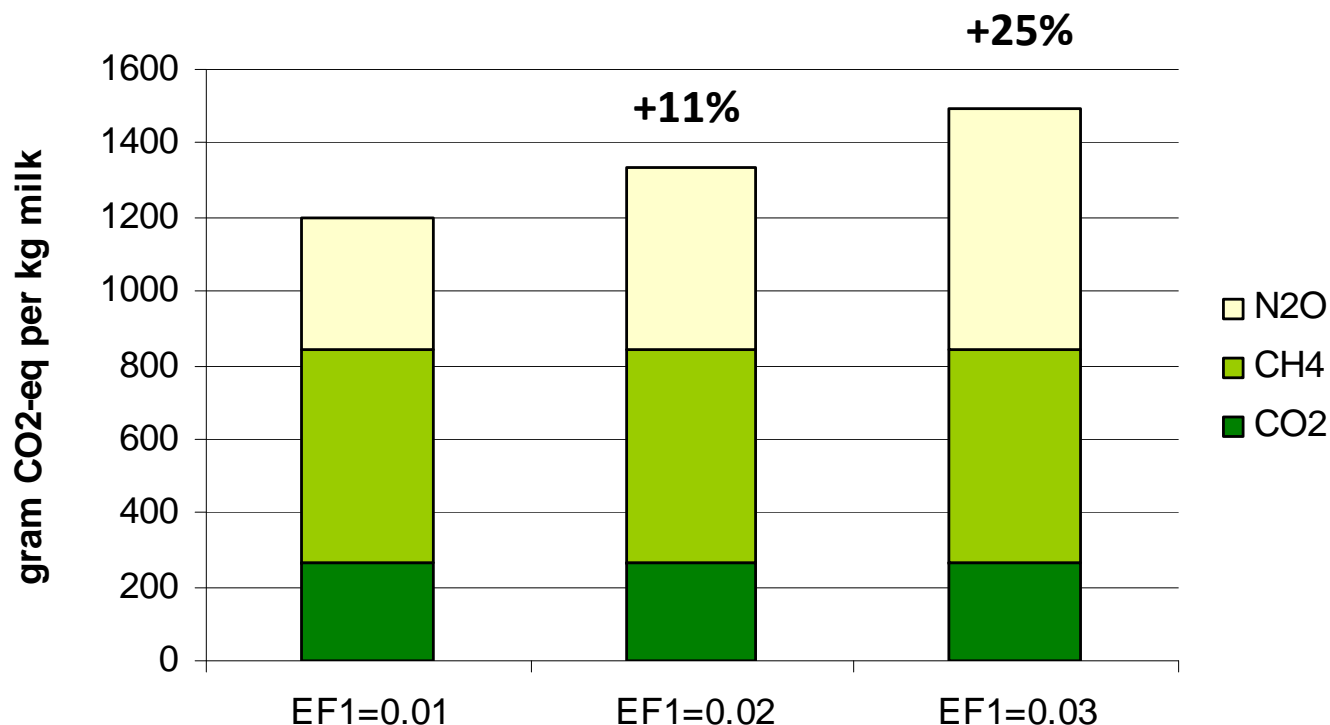
Contribution to global warming depending on co-product handling



source: Cederberg & Stadig, 2003



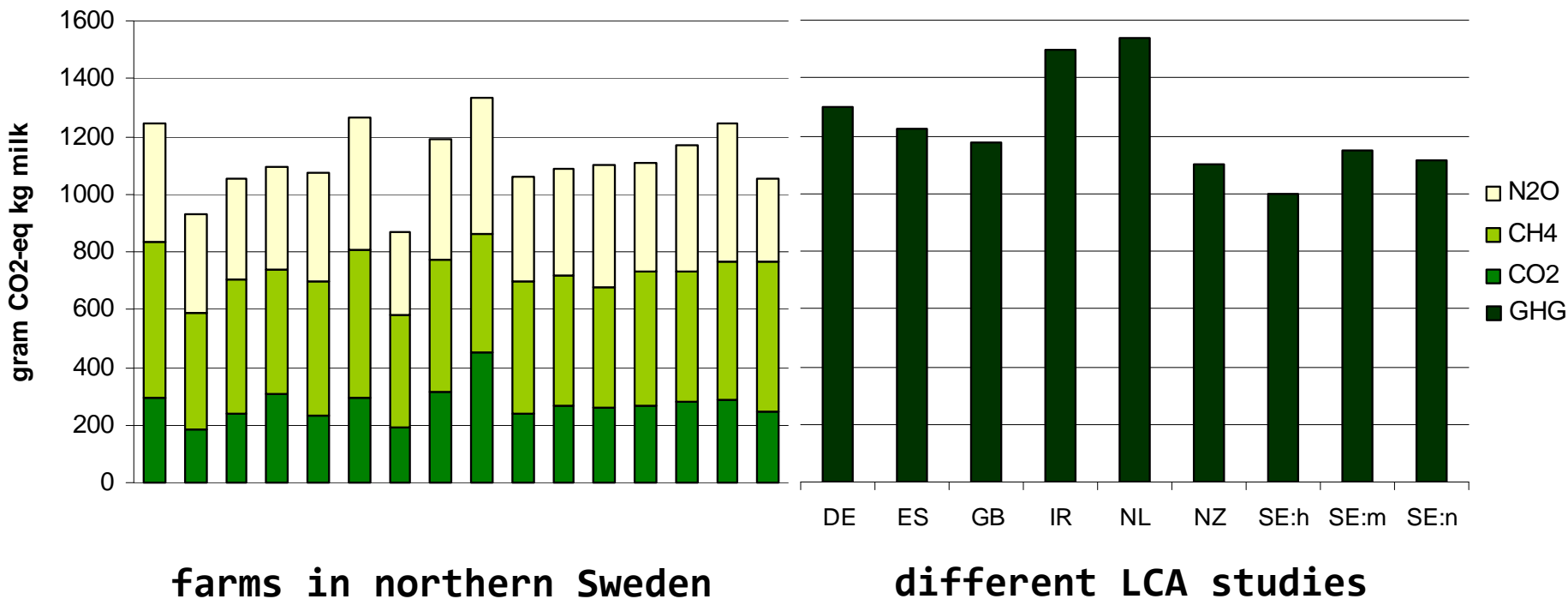
Emission factor for N₂O from application of N-fertiliser



- "uncertainty assessment" of EF1 (N₂O emissions from fertilisers on farm)
data taken from one of the farms from Cederberg *et al* 2007 (CF changed to IPCC 2007)
- default value EF1 0.01; uncertainty range 0.003-0.03 (IPCC 2006)

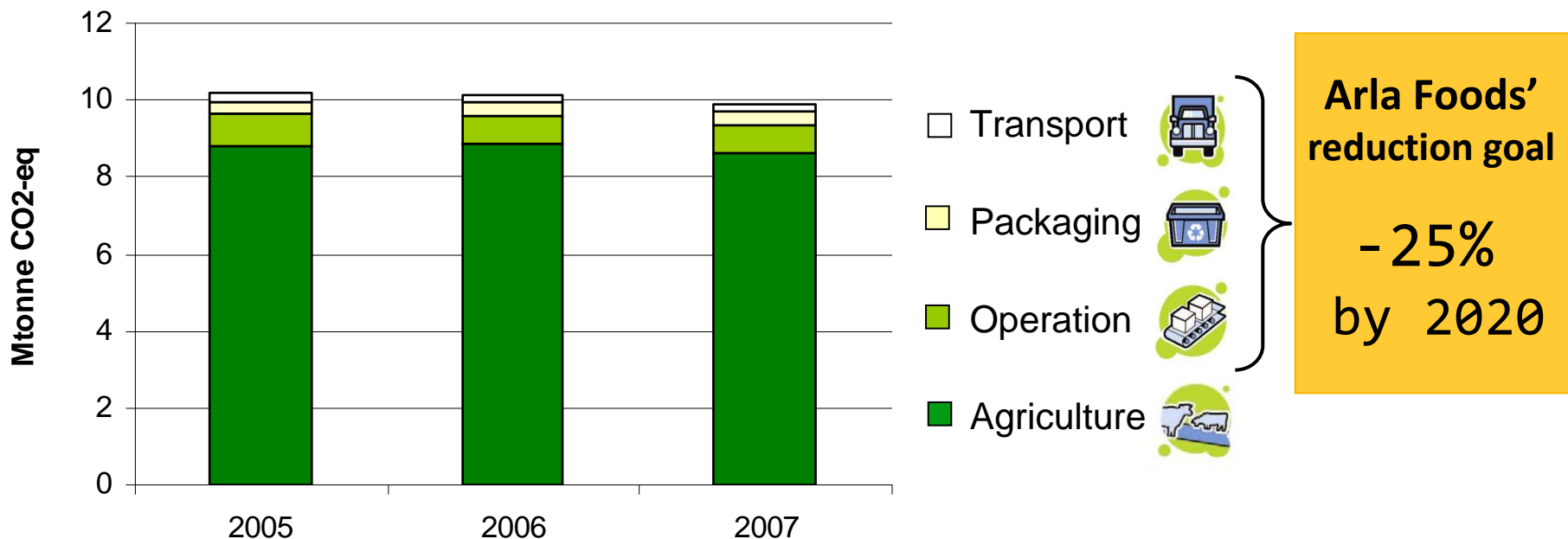


Challenges with obtaining "relevant" data





Total Carbon Footprint of the dairy company Arla Foods



Conclusions



- ✓ methodological choices important
- ✓ large uncertainties within systems
- ✓ important with further work
(understanding systems,
uncertainties etc)

...and for Arla Foods

- ✓ primary production is most crucial,
but difficult to influence
- ✓ milk is a valuable raw material!
- ✓ difficult to put a carbon label on
dairy products today





Thank you for your attention!
Questions?