

Slaughter offal to feed or to fuel

a comparison of systems in terms of
energy balances, land use and
emissions

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Background

- ◆ Europe: BSE - feed ban - very restricted market for meat- and bonemeal (MBM)
- ◆ Local: Odor problems from processing of slaughter offal to MBM
- ☞ Need for other solutions
- ☞ Need for comparison of solutions

Two systems compared

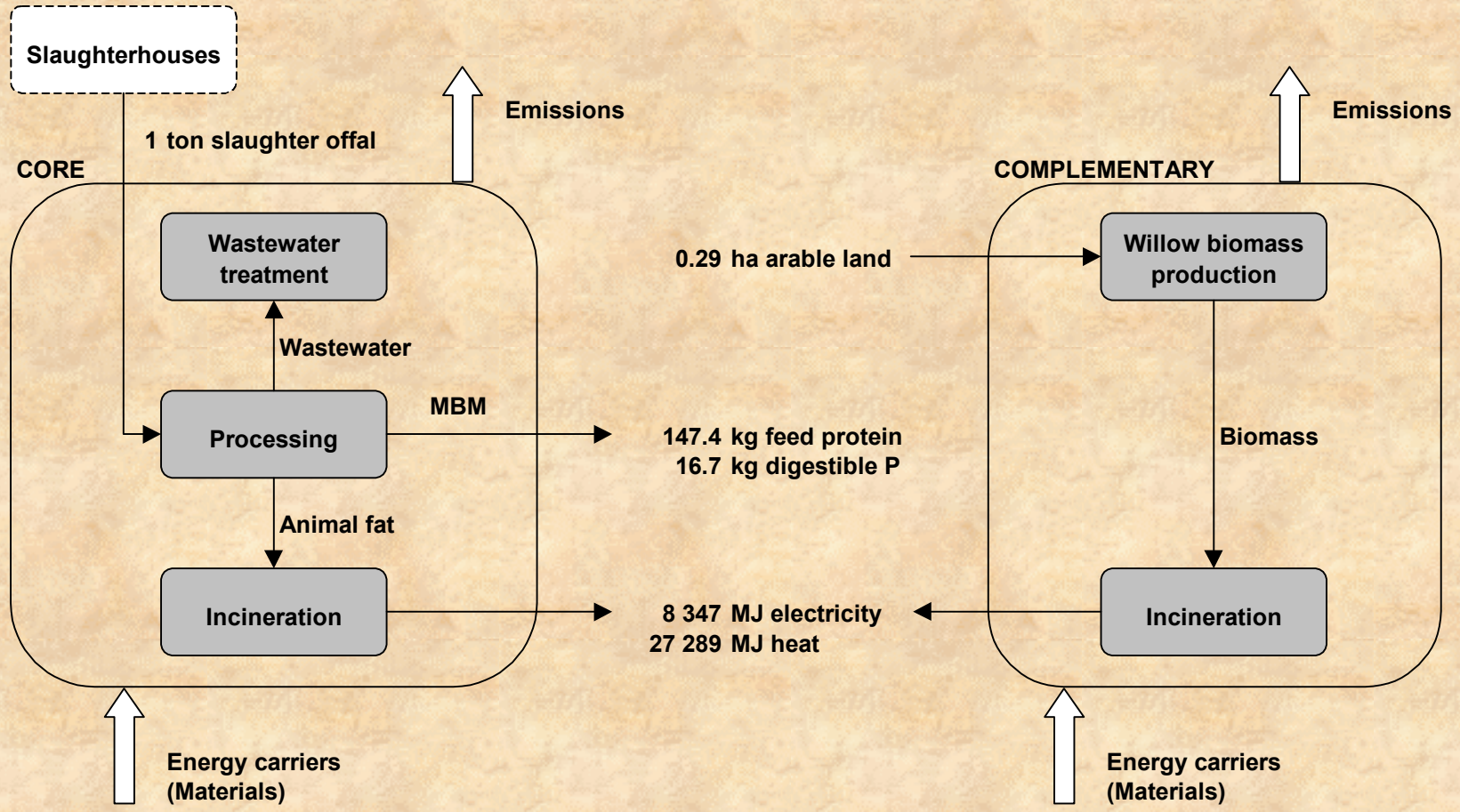
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Processing of slaughter offal to
MBM (feed) and to animal fat (fuel)

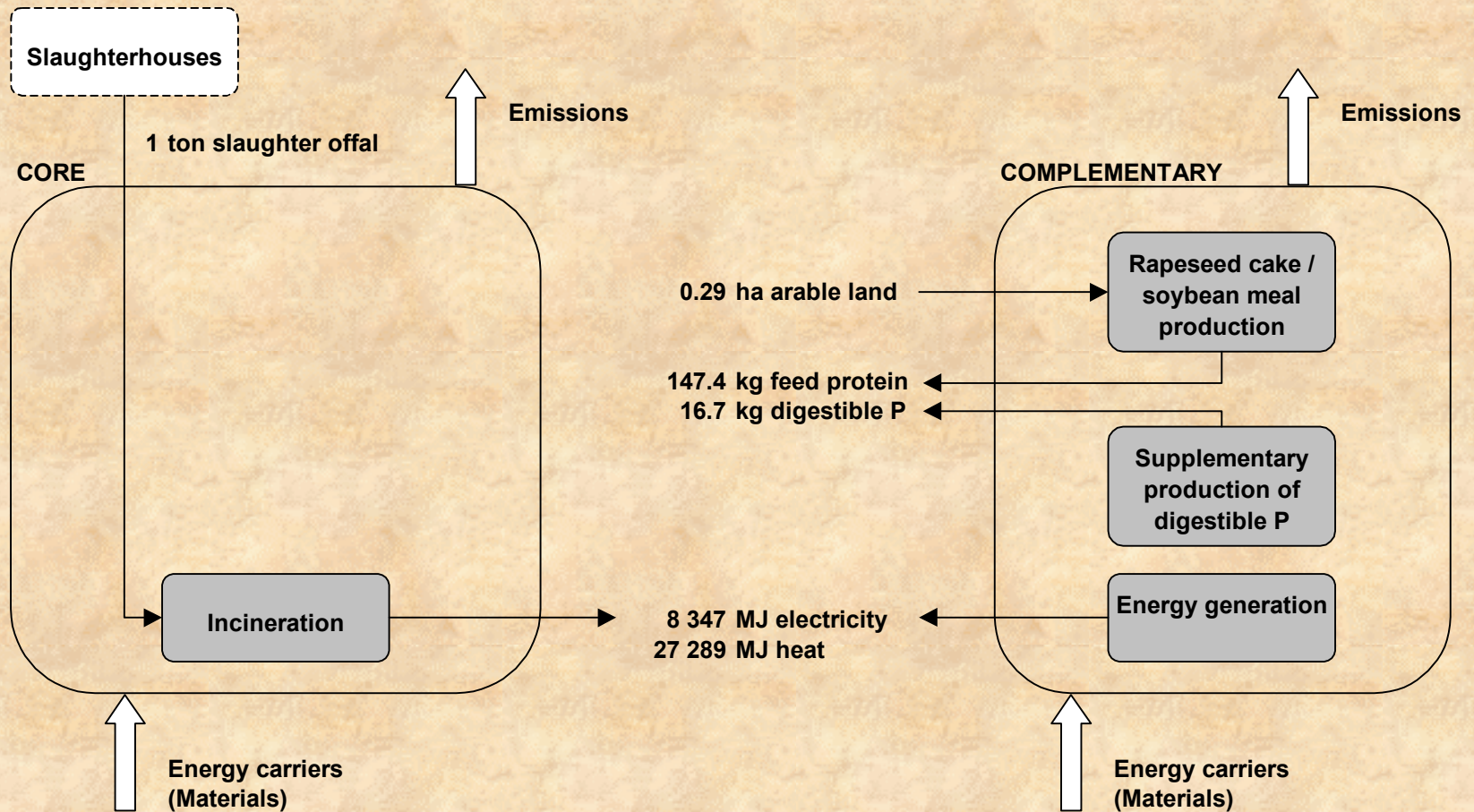
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Direct incineration of
slaughter offal (fuel)

1



2



Sub-systems: Methods

- ◆ Processing & WWTP - input / output
- ◆ Incineration - ORWARE
- ◆ Willow biomass production - LCA from literature (Heller et al. 2002)
- ◆ Rapeseed cake & soybean meal prod. - SALSA

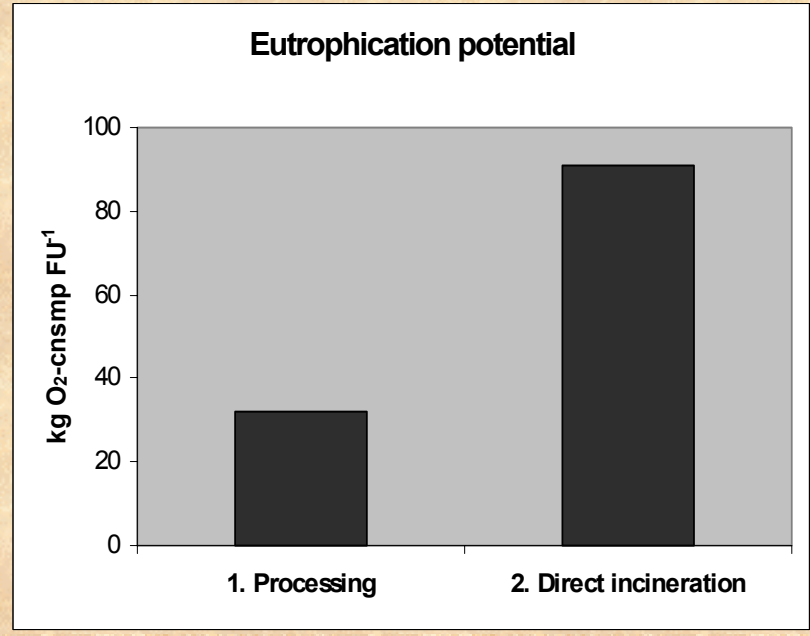
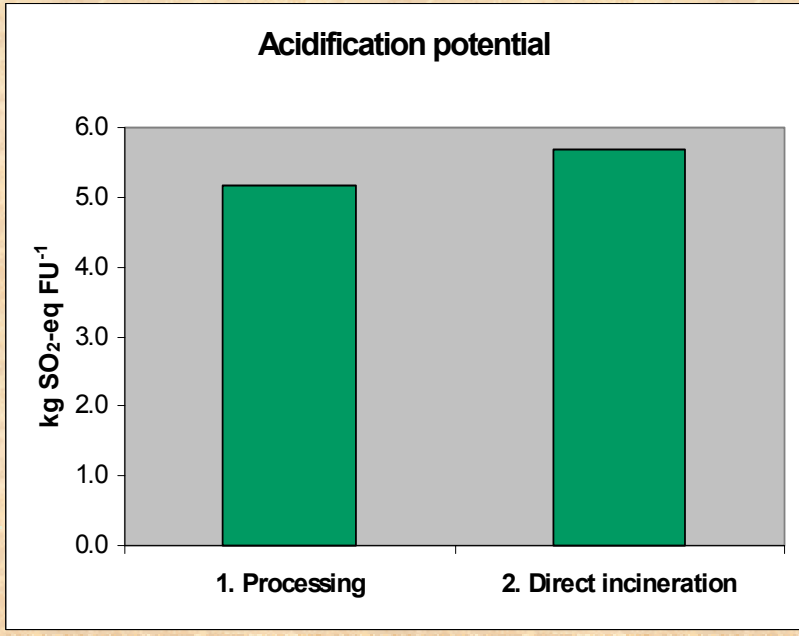
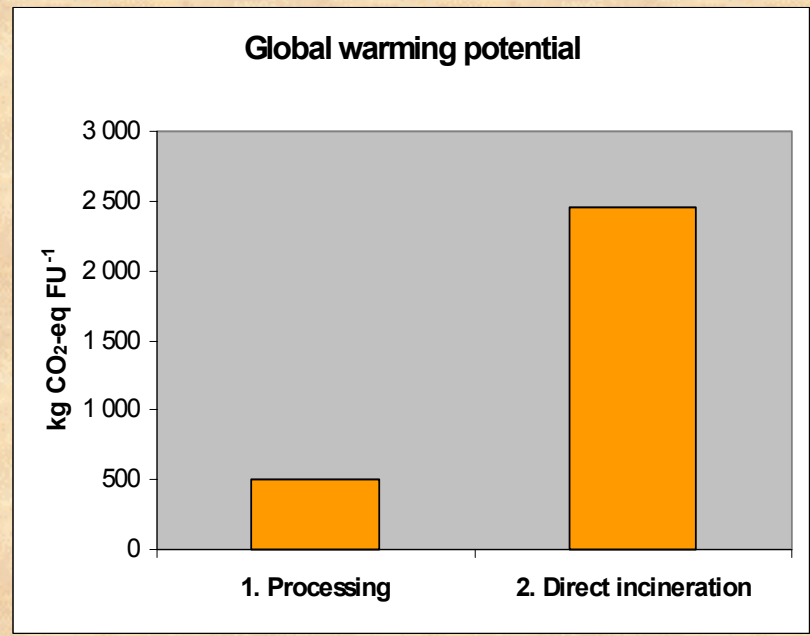
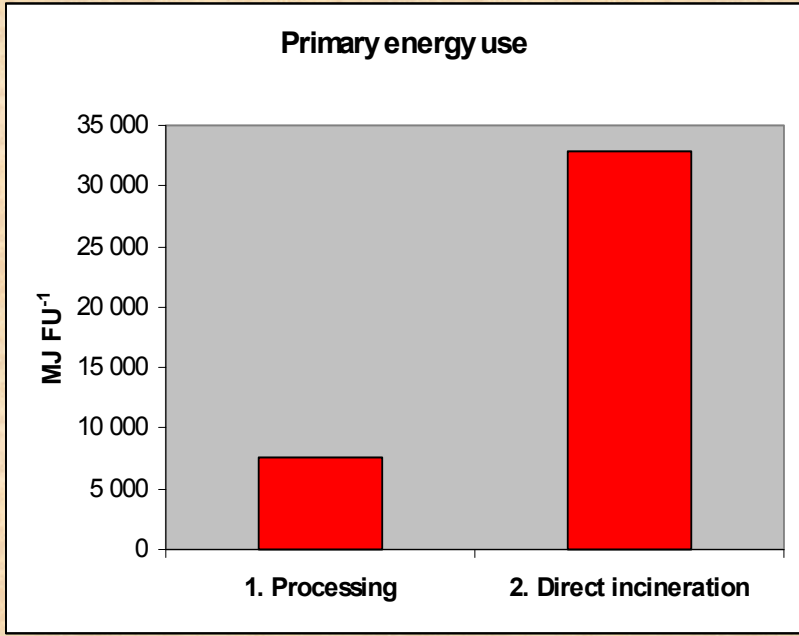
Impact assessment

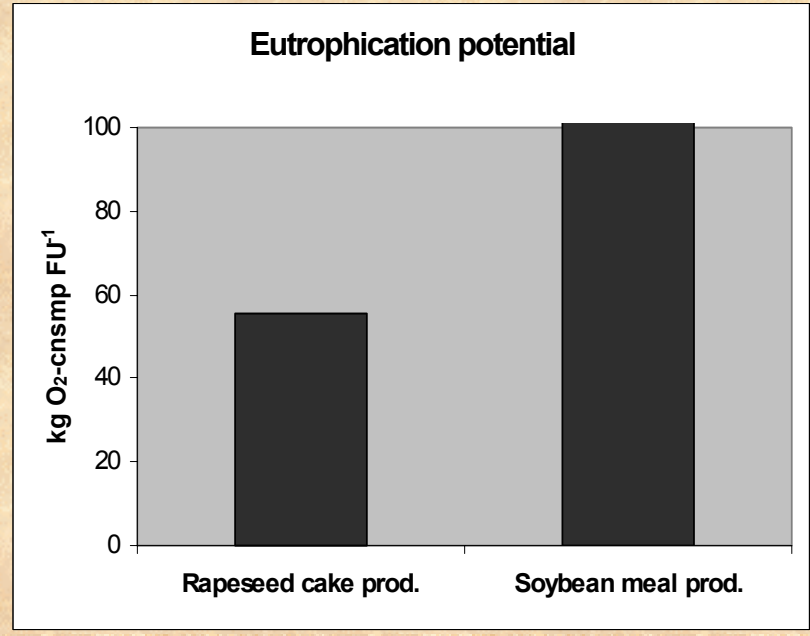
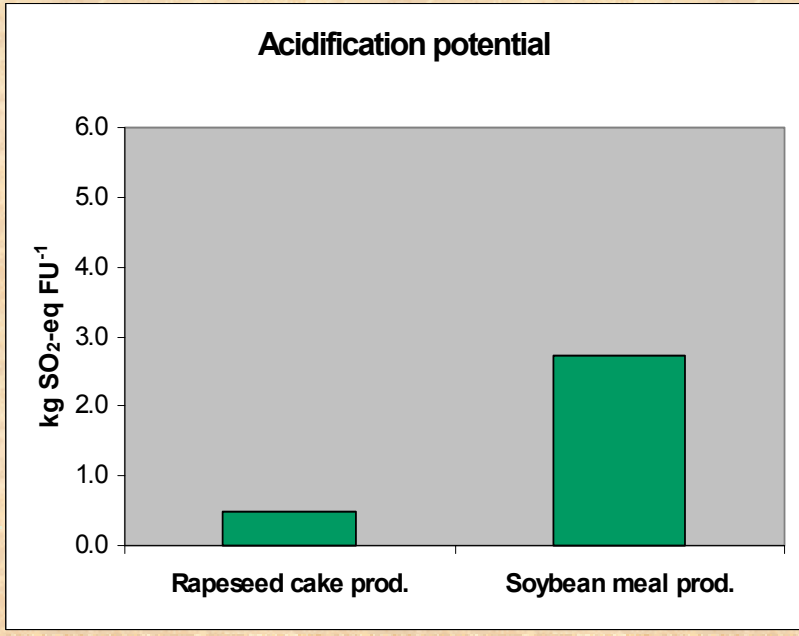
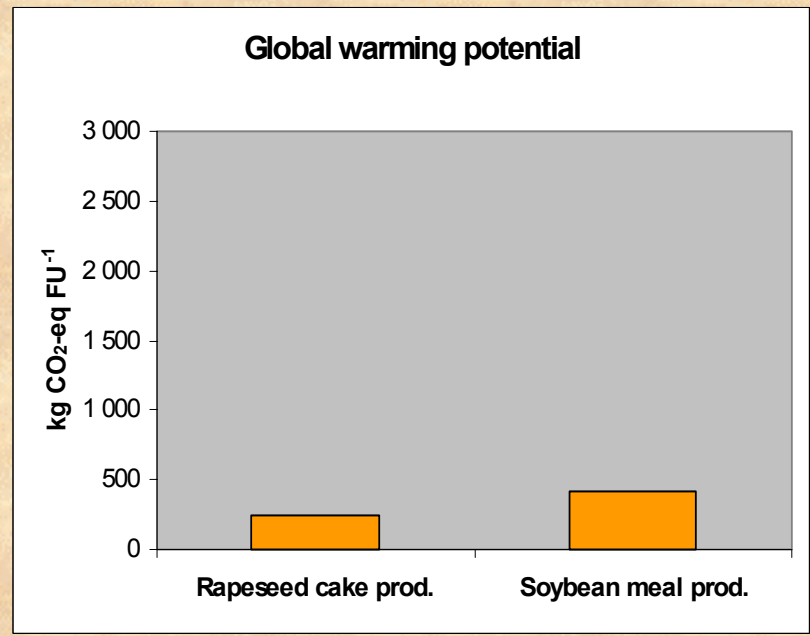
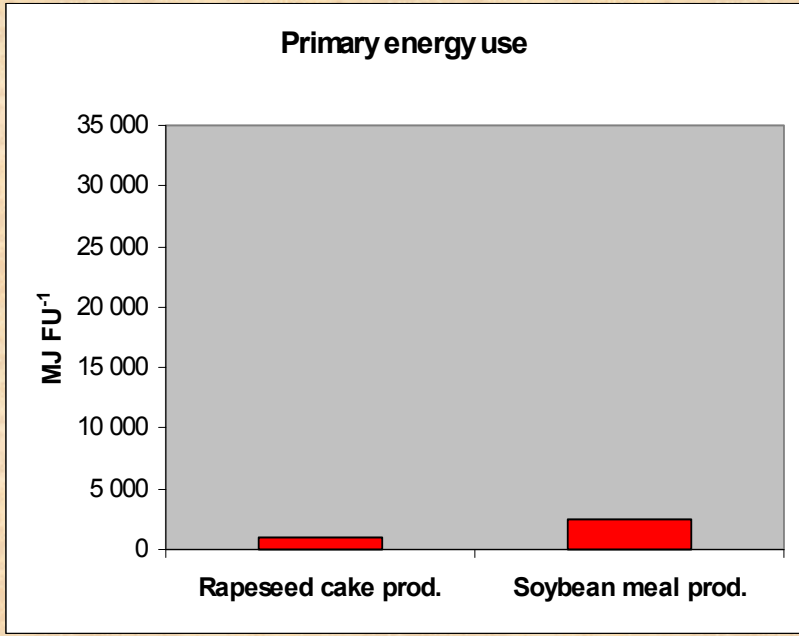
Primary energy use

Global warming

Acidification

Eutrophication





Discussion

- ◆ Feed or fuel?
- ◆ Willow or fallow?
- ◆ Simplified or no analysis?