

Liquid manure decomposition

The rotting of organic matter is a minimal phenomenon in nature that, in the end, through biological oxidation leads to material recycle.

The goal of decomposition is to produce the flammable gas, methane or "biogas"

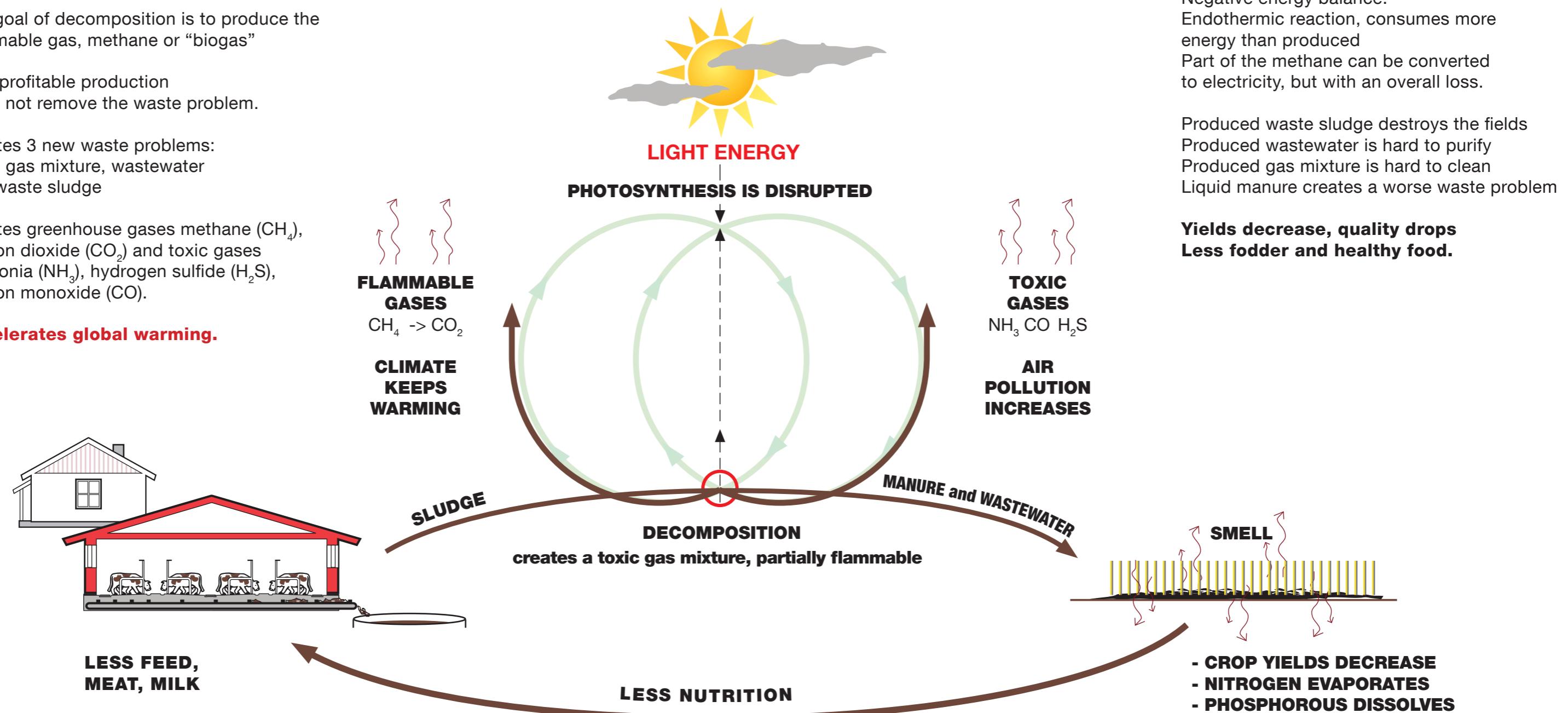
Non-profitable production
Does not remove the waste problem.

Creates 3 new waste problems:
Toxic gas mixture, wastewater
and waste sludge

Creates greenhouse gases methane (CH_4),
carbon dioxide (CO_2) and toxic gases
ammonia (NH_3), hydrogen sulfide (H_2S),
carbon monoxide (CO).

Accelerates global warming.

Decomposition (rotting) of organic material DESTROYS THE FOUNDATION OF LIFE



DECOMPOSITION (Biogas production)
 => green house gases ($\text{CH}_4 \text{ CO}_2$) from decomposition accelerate global warming
 => decrease yields
 => one problem leads to three new problems
 => negative material and energy balance => costly and non-profitable method

Negative material balance:
Large nutrition losses
Nitrogen evaporates, phosphorous
dissolves into water systems

Negative energy balance:
Endothermic reaction, consumes more
energy than produced
Part of the methane can be converted
to electricity, but with an overall loss.

Produced waste sludge destroys the fields
Produced wastewater is hard to purify
Produced gas mixture is hard to clean
Liquid manure creates a worse waste problem

Yields decrease, quality drops
Less fodder and healthy food.