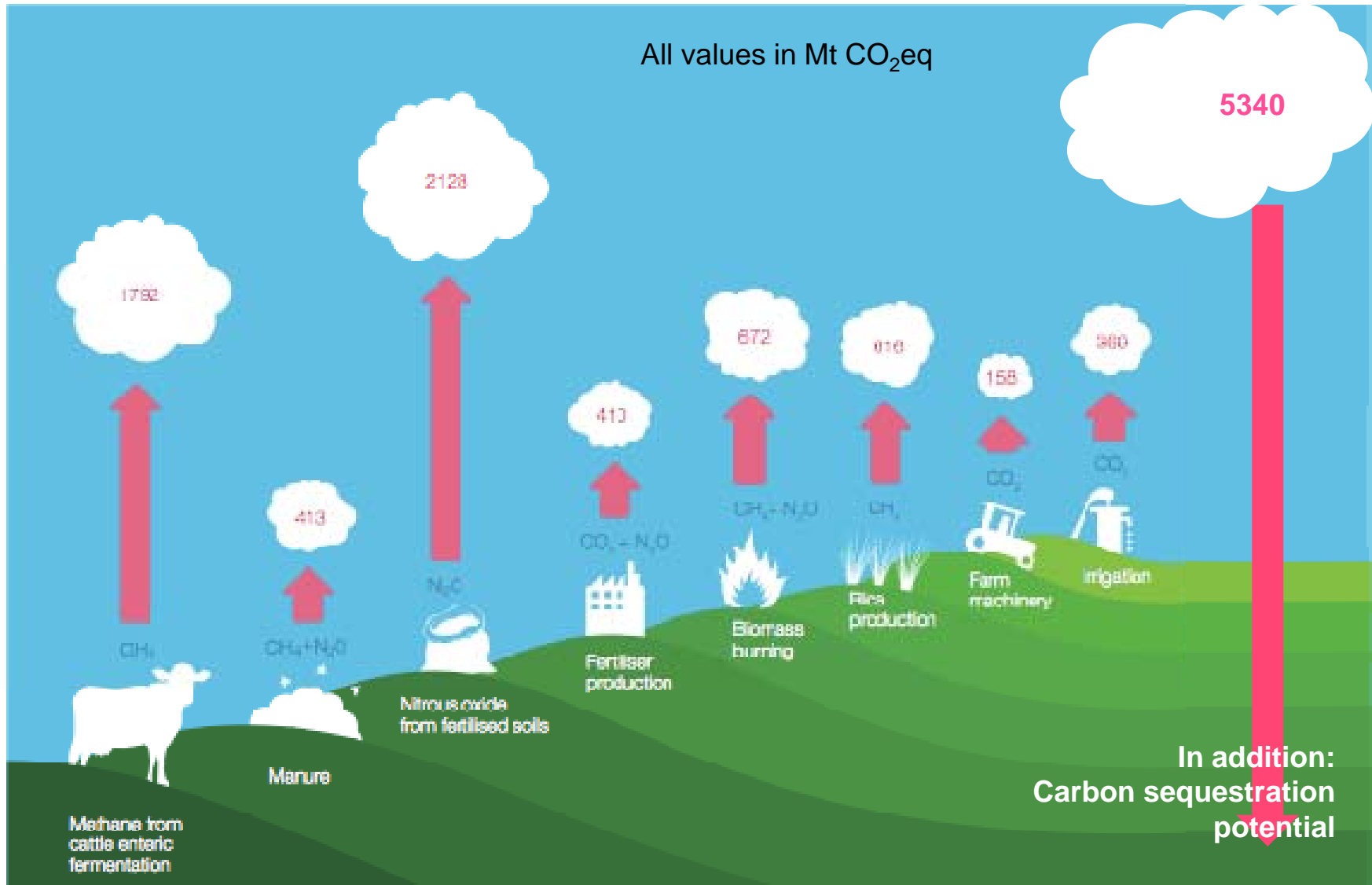


# Mitigation Potential of Organic Farming Systems

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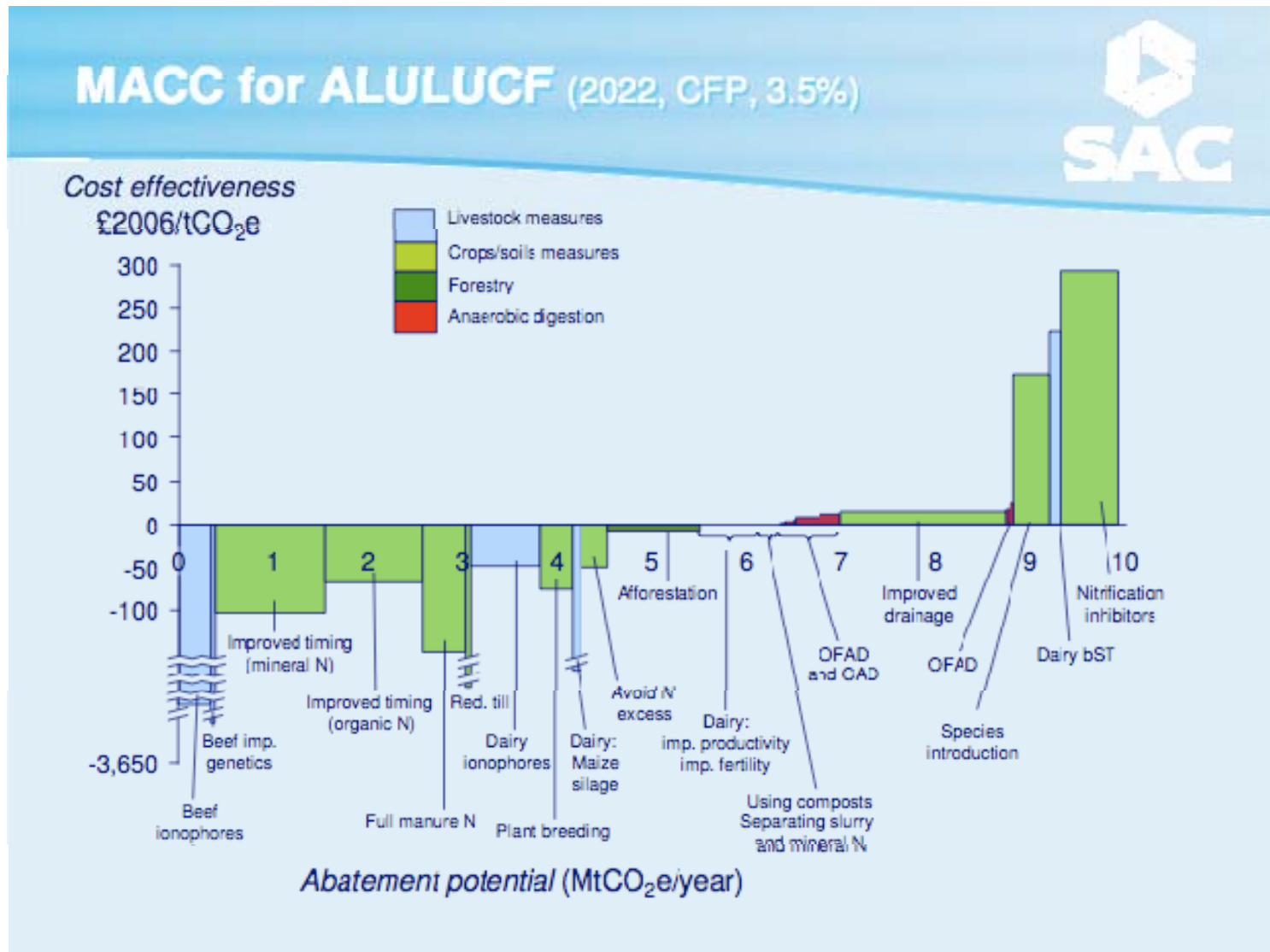
# GHG Emissions in Agriculture



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# Mitigation at what costs? A MAC for agriculture

(just for illustration – gross assessment from the UK)



# Examples of Mitigation Practices

**(very rough and preliminary numbers!!!)**

- Fertilizer replacement (0.4 t CO<sub>2</sub>eq/ha/y)
- Composting (2 t CO<sub>2</sub>eq/ha/y)
- Soil Carbon Sequestration: minimal in crop rotations on mineral soils, maximal for restoration of peat-lands (0.7 t CO<sub>2</sub>eq/ha/y – 85 t)
- Methane recovery from manure (7 t CO<sub>2</sub>eq/ha/y)
- Avoided biomass burning (0.3-6 t CO<sub>2</sub>eq/ha/y)
- Agroforestry (10 t CO<sub>2</sub>eq/ha/y)
- Biogas electricity (1 t CO<sub>2</sub>eq/ha/y – manure & biomass biogas)
- Crop rotation with legumes (10 t CO<sub>2</sub>eq/ha/y; all incl.)

**(very rough and preliminary numbers!!!)**

# What is available?

## Where are the gaps?

### Soil-C:

- many regional values in Europe, USA
- many areas missing: no values for Africa, Central Asia, ...
- Existing values mostly refer to concentrations, hardly any stock values

### N<sub>2</sub>O, CH<sub>4</sub>

- even less data available than for Soil-C
- complex measurement – e.g. continuous measurement necessary (once a month is insufficient)

**Baseline: landfill dynamics, burning, system boundaries...**