

Reducing Gaseous Emissions From Manure by Use of an Oxygen Based Amendment

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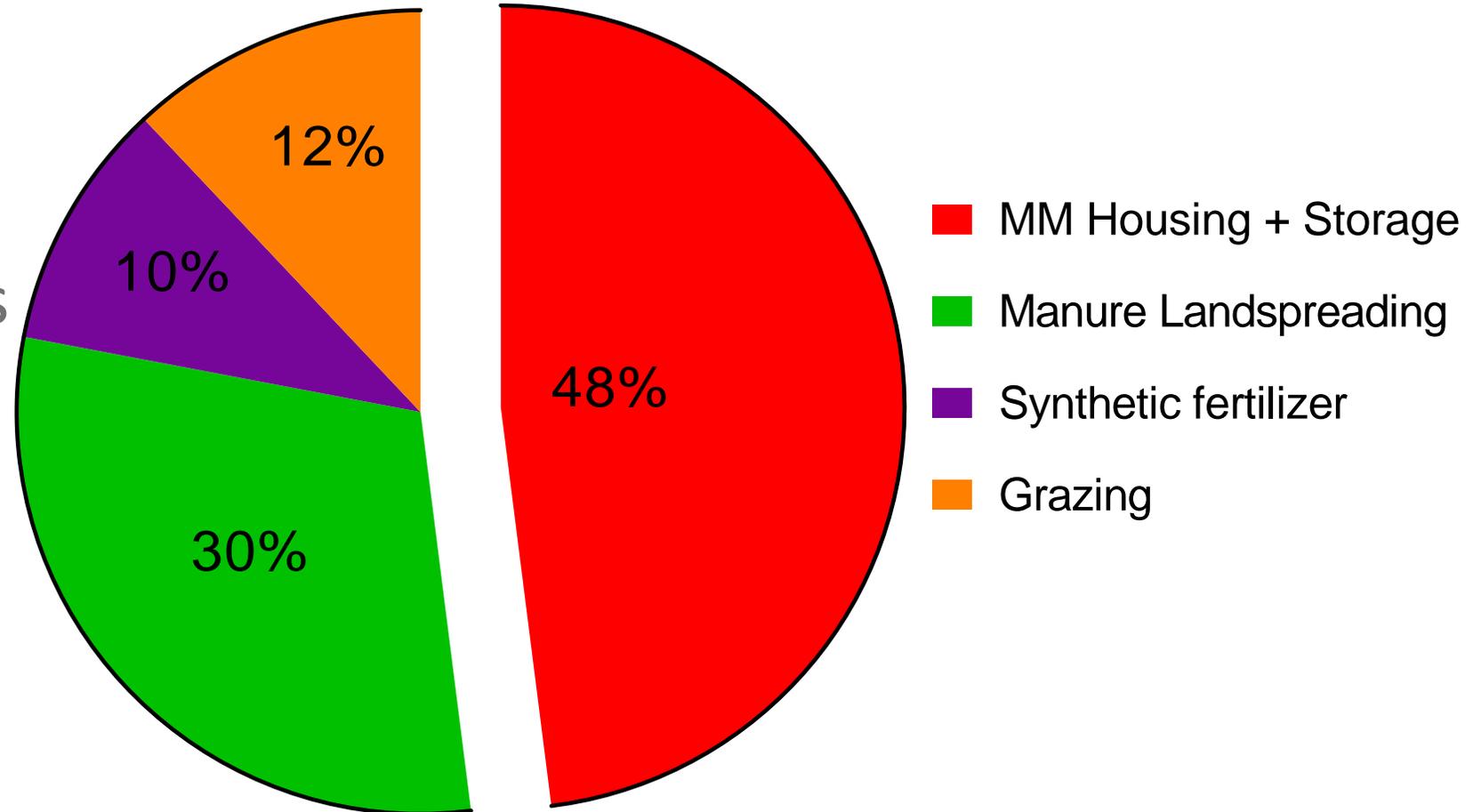


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NUI Galway



Manure Management

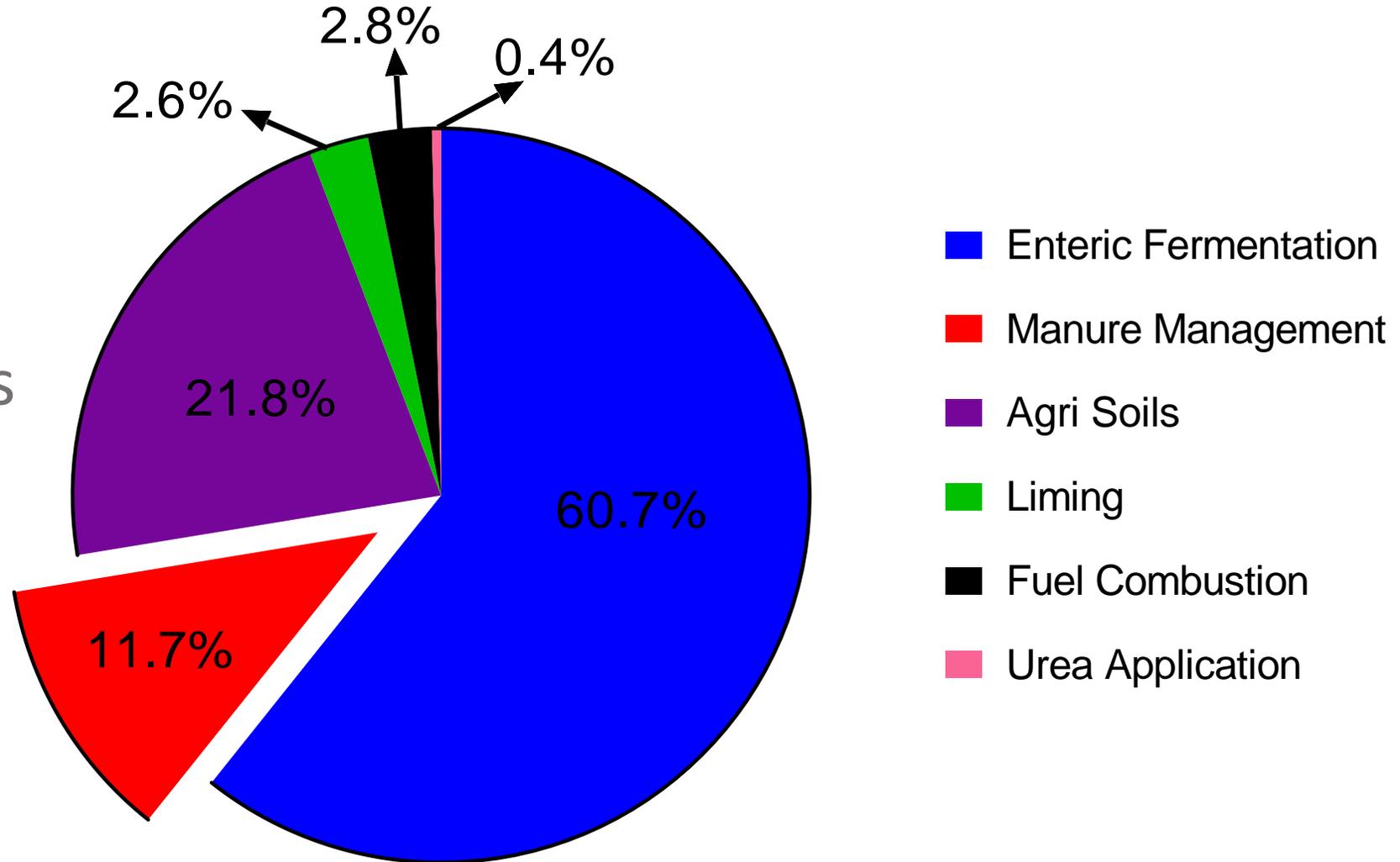
Agriculture - 99% of National NH₃ Emissions



Manure Management

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CH₄ – 8-10% Agri GHG Emissions

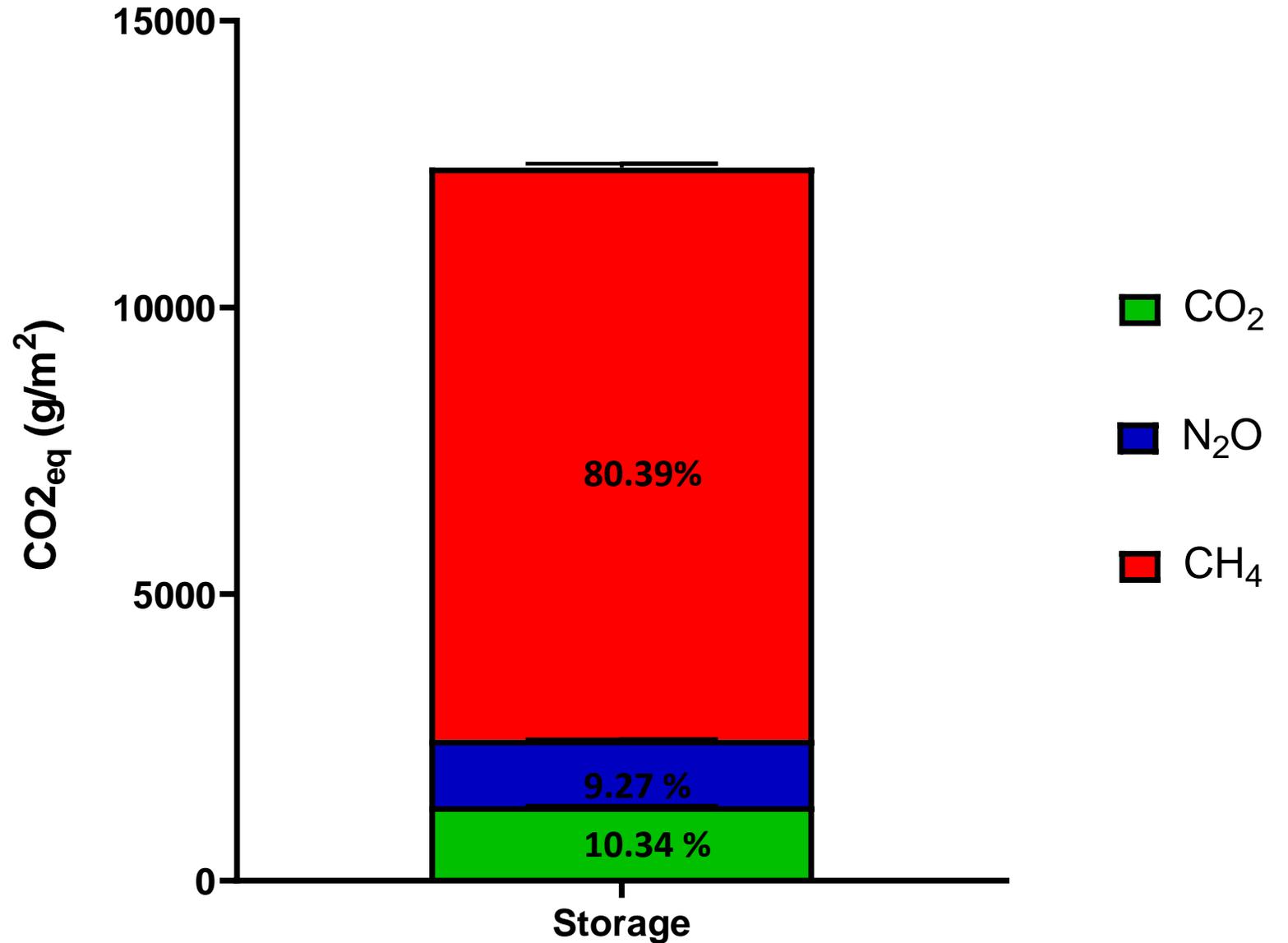


Manure Management

Agriculture - 99% of National NH₃ Emissions

CH₄ – 8-10% Agri GHG Emissions

CH₄ primary GHG from storage



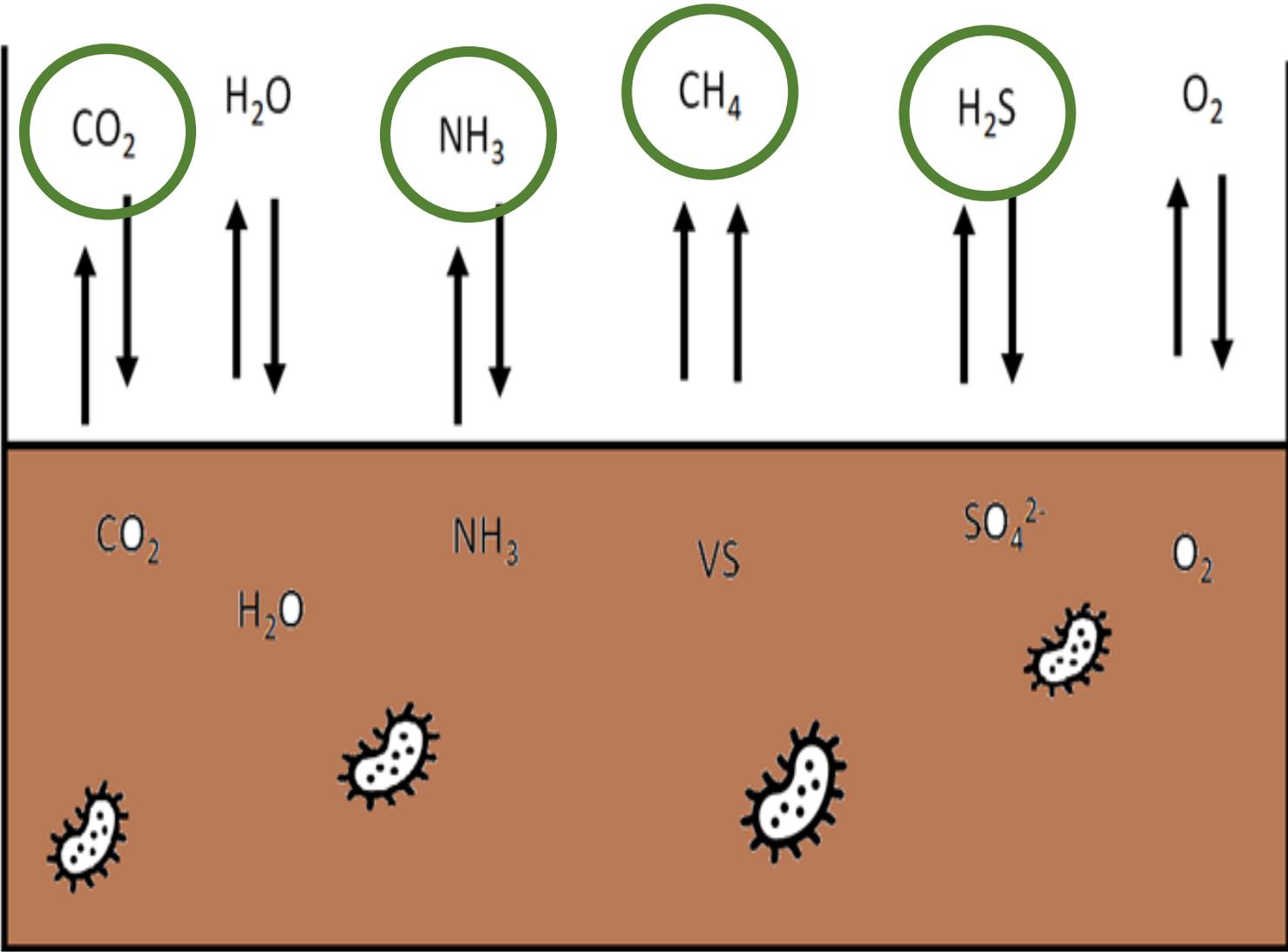
Cattle Slurry Emissions

Main Gases in MM – CH_4 & NH_3

CO_2 , N_2O and H_2S – important also

Microbial and physiochemical processes

Mitigation - limited



Cattle Slurry

Emissions

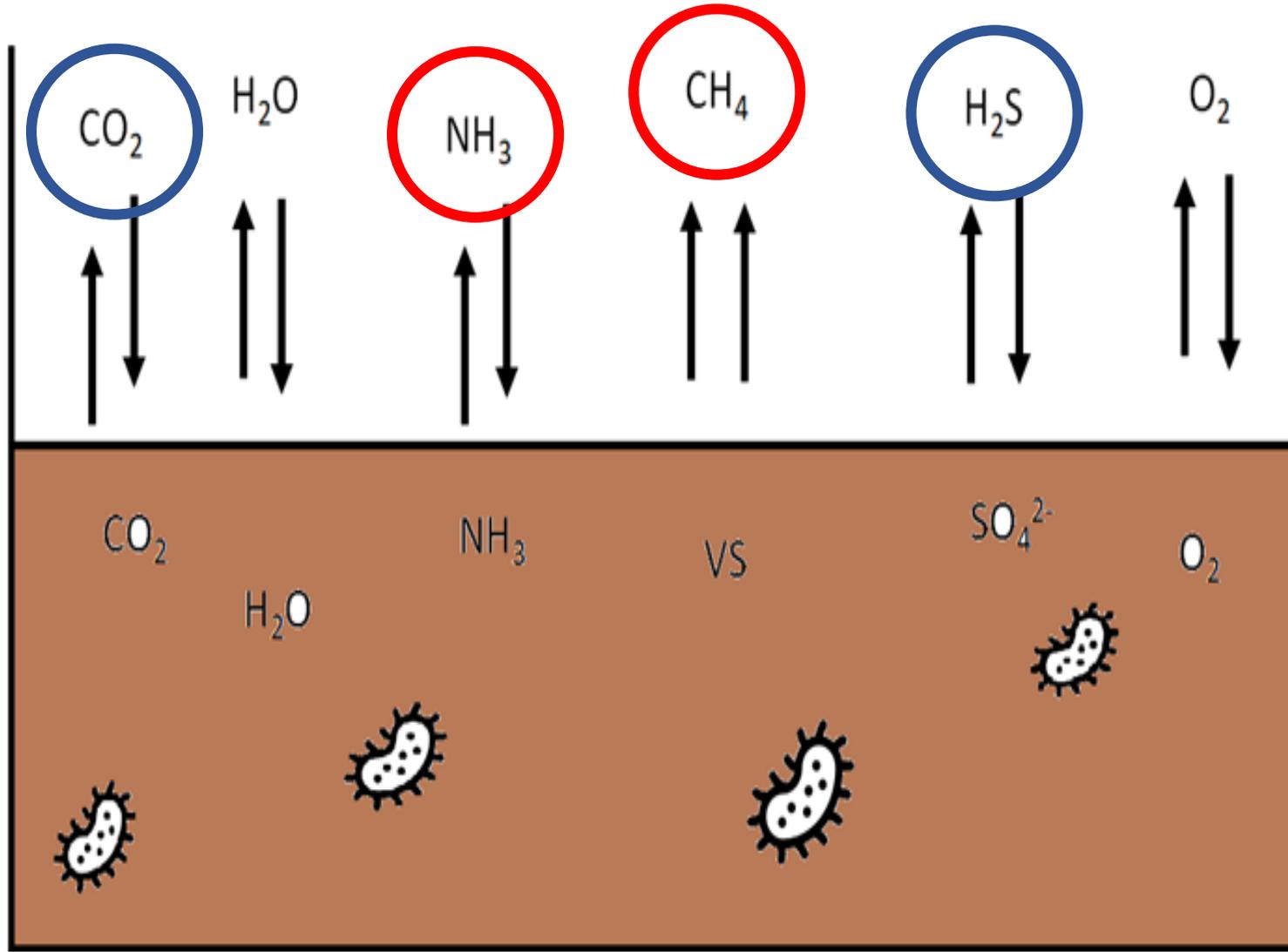
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Microbial and physiochemical processes

Mitigation - limited

Acidification - Sulphuric



Cattle Slurry Emissions

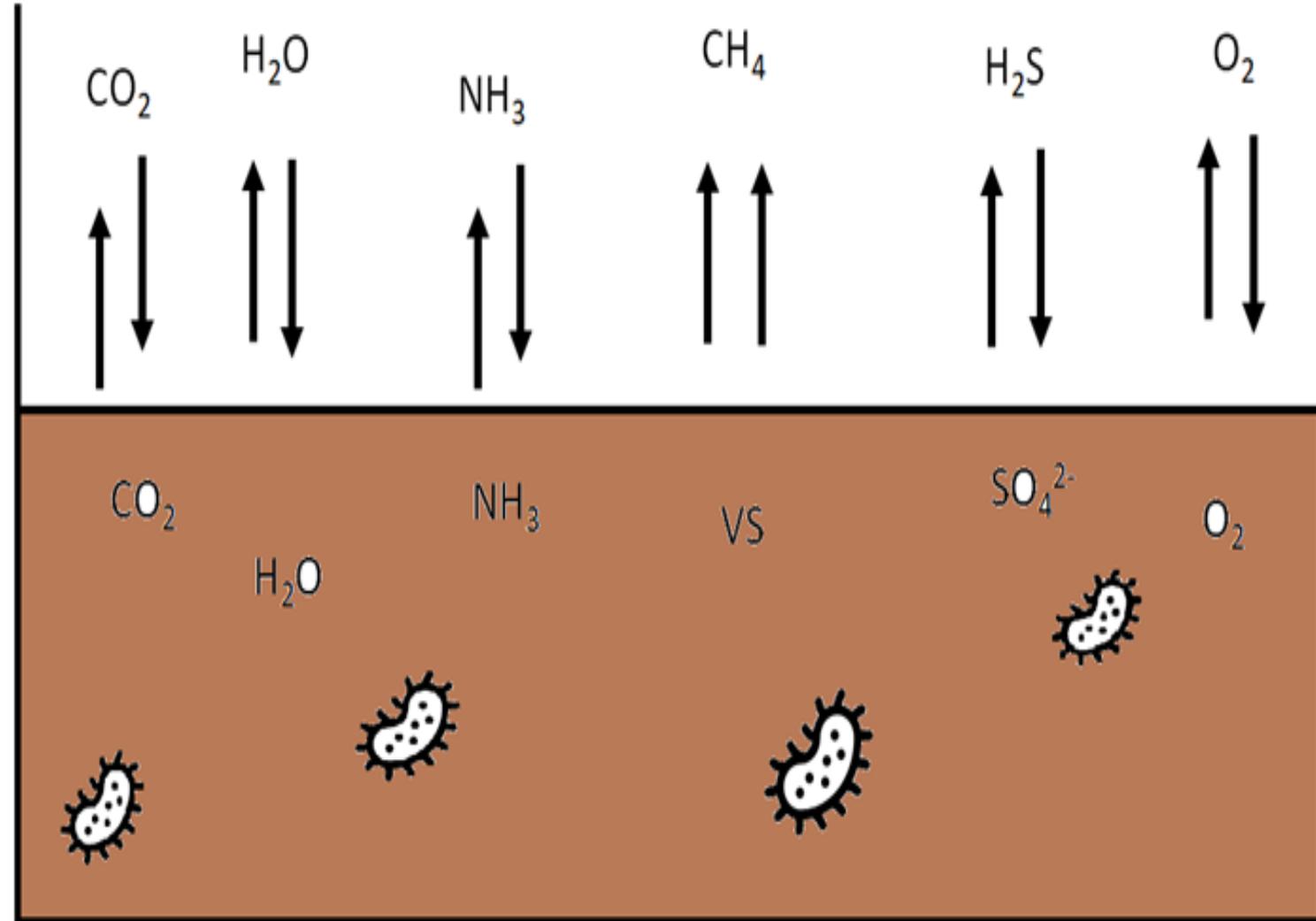
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Microbial Based – N Mineralisation



Cattle Slurry

Emissions

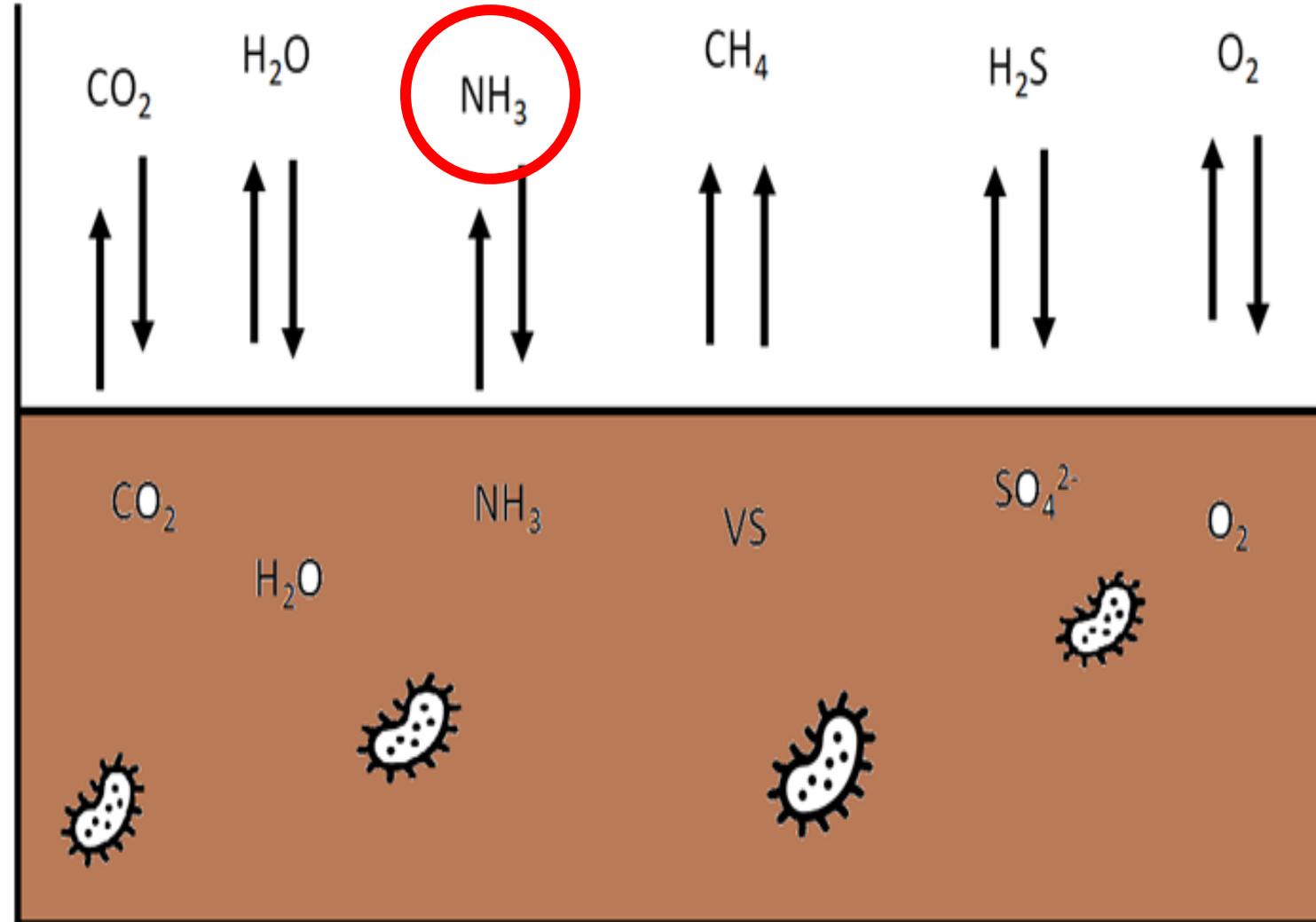
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Adsorption Based - Biochar



Cattle Slurry

Emissions

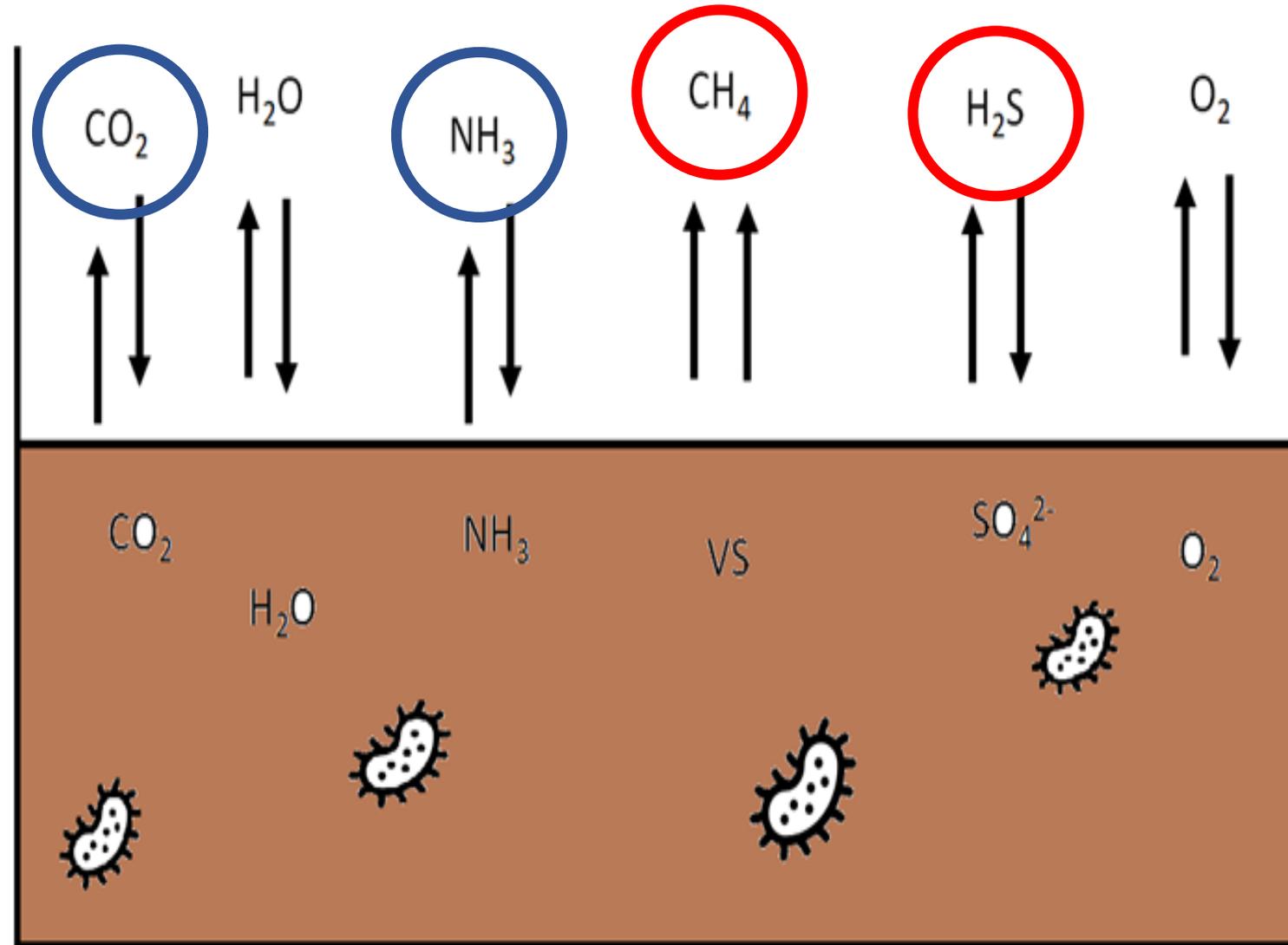
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Mitigation - limited

Oxygen Based – Aertion, GebTech



My Work – Teagasc and NUIG

1.6 kg - 3 Incubations – 21 Variations



20 kg - 2 Incubations – 6 Variations



Spreading Trial - 2 Experiments – 5
Variations



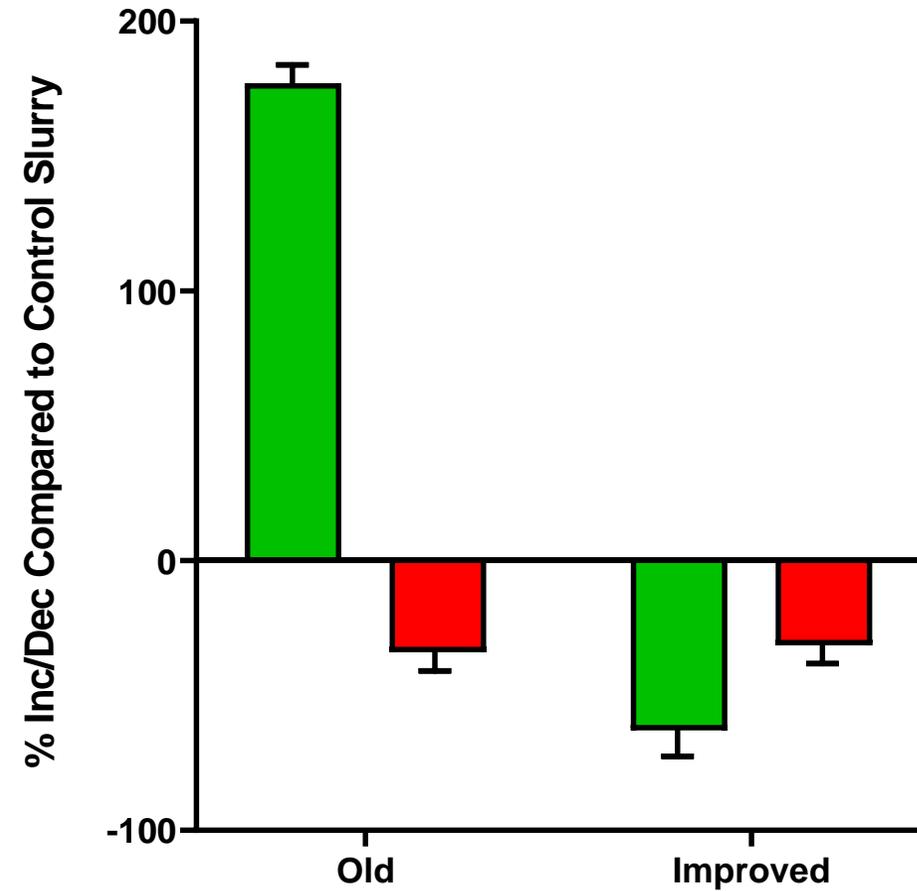
Anaerobic Digestion – 2 Experiments
– 6 Variations



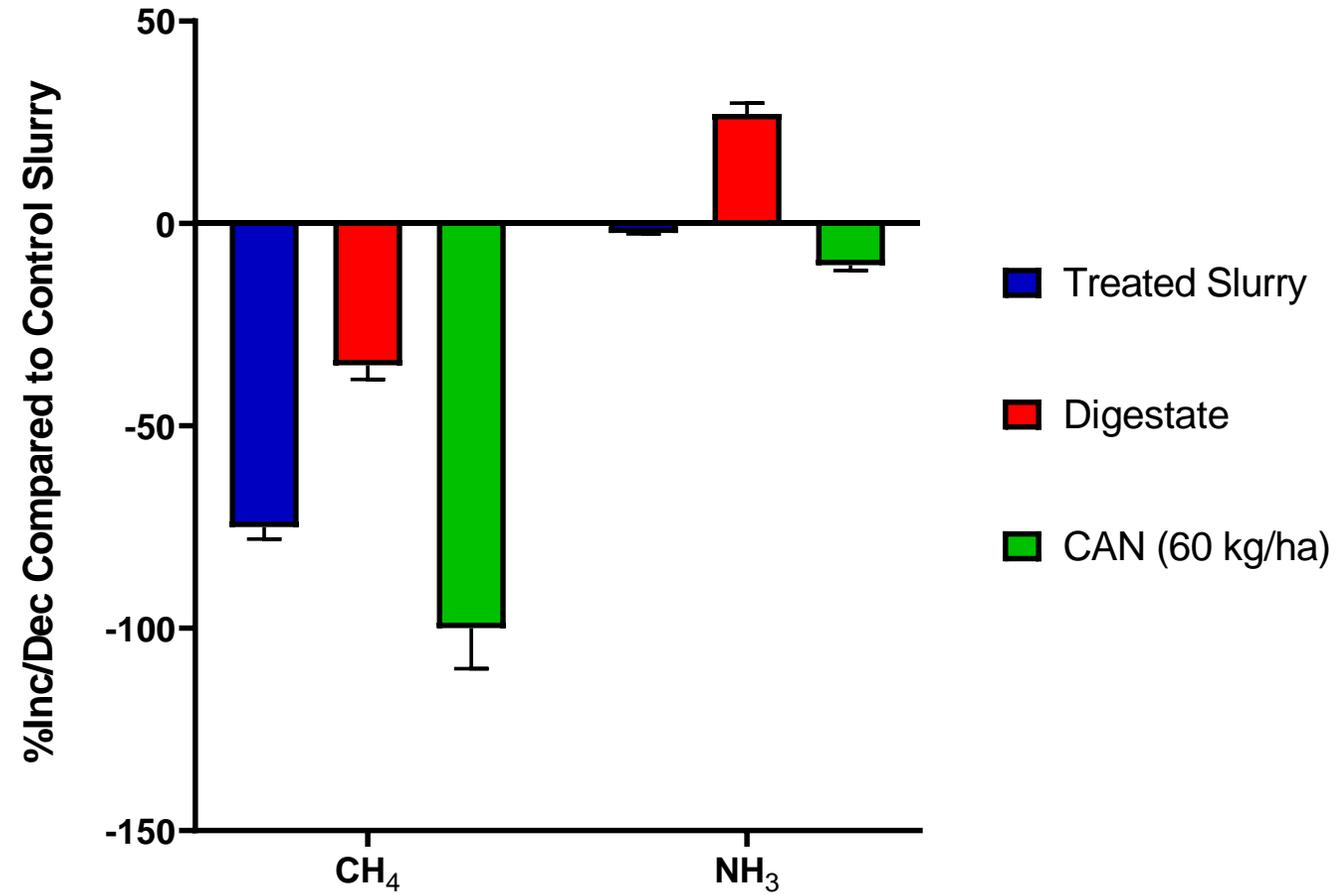
660 L- 1 Incubation – 2 Variations



Storage



Spreading



Take Home Messages

Slurry amendments do work in:

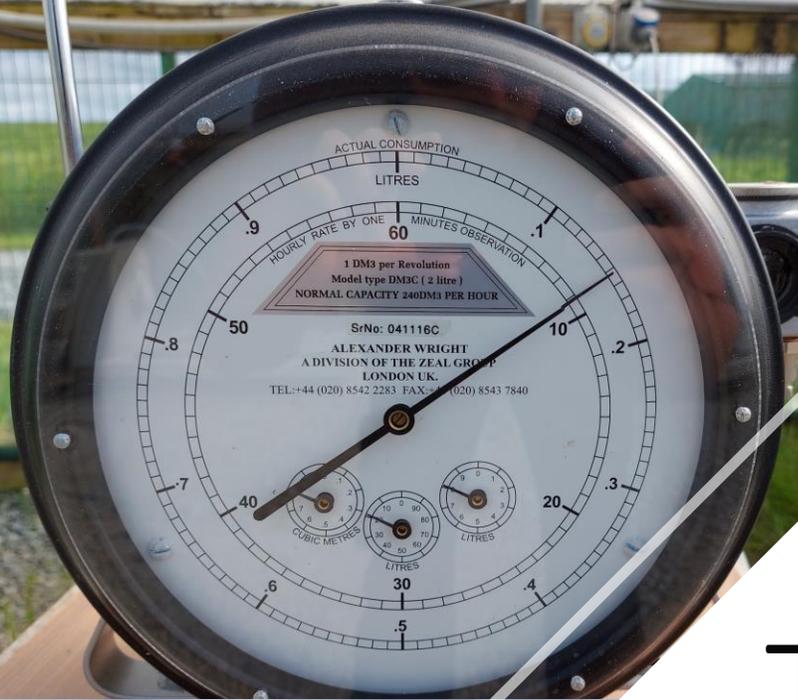
- Reducing emissions

- Increasing Fertilizer Value

Work to reduce emissions in different ways

Advantages and disadvantages for each amendment

Can be A solution; is not THE solution



Thank You!

