New Technologies to Improve Nitrogen Use Efficiency

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Signpost Farms General Assembly
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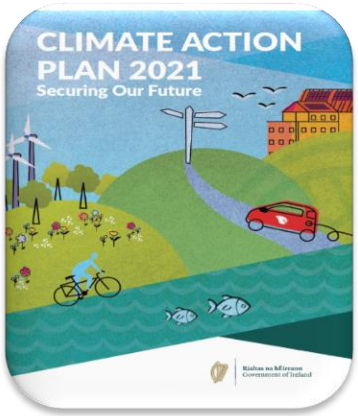
Teagasc
Agriculture and Food Development Authority

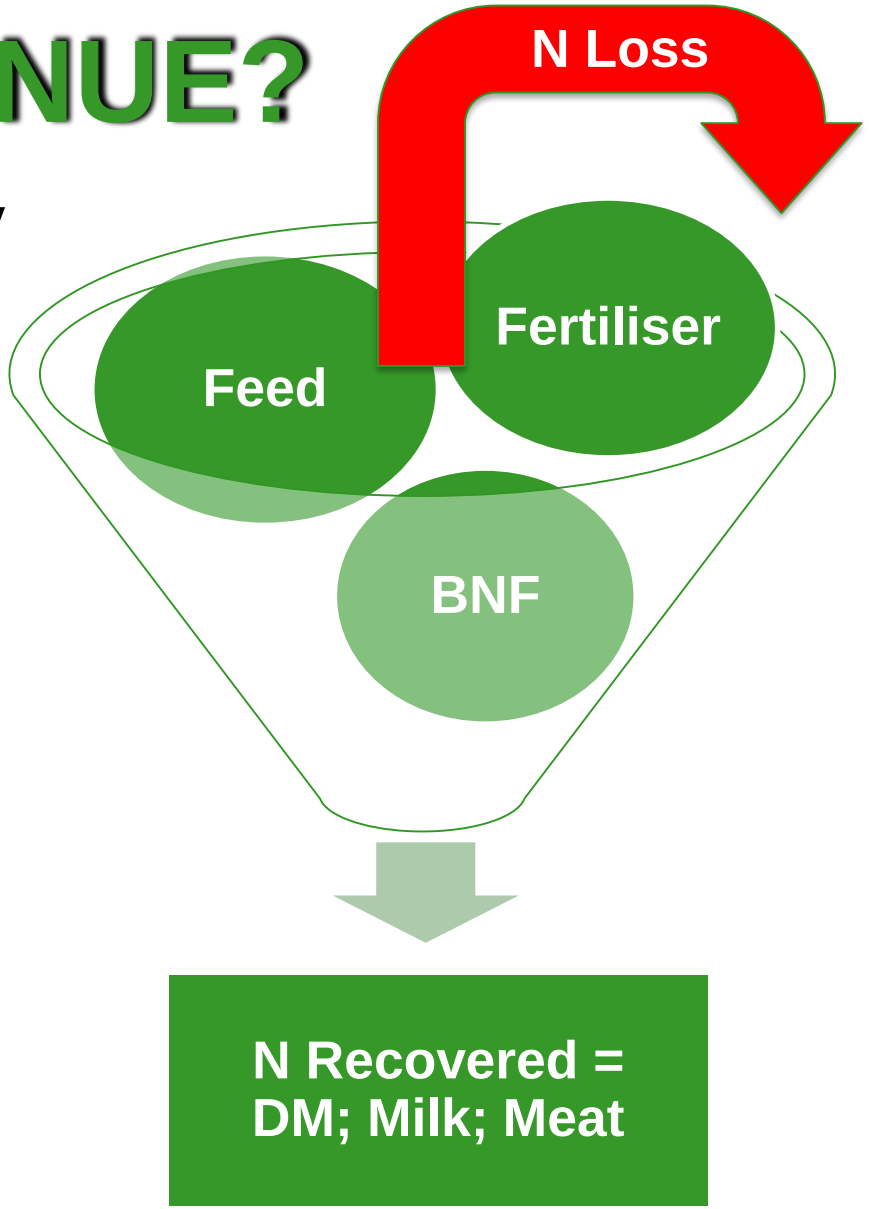
Background



- Challenging Policy Objectives
  - Maintain / increase agricultural outputs
  - Reduce GHG + Improve water quality + Protect biodiversity
- Need to minimise N loss from agriculture to the environment
- Aim to improve NUE

What is NUE?

- **Nitrogen Use Efficiency**
  - Nitrogen recovered in outputs as a percentage of nitrogen supplied in inputs
  - Values depend on scale of research (e.g. pot vs field plot vs farm scale)
  - Typically low for pasture-based dairy → 29 – 37% (Burchill et al., 2016)



Farm Sustainability Tools for Efficient Nutrient Management

Develop new knowledge to improve NUE

Reducing potential N loss to the environment

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Soil, environment and farming system specific nutrient advice

Identify best KT methods and develop decision support tool

UCD School of Agriculture and Food Science

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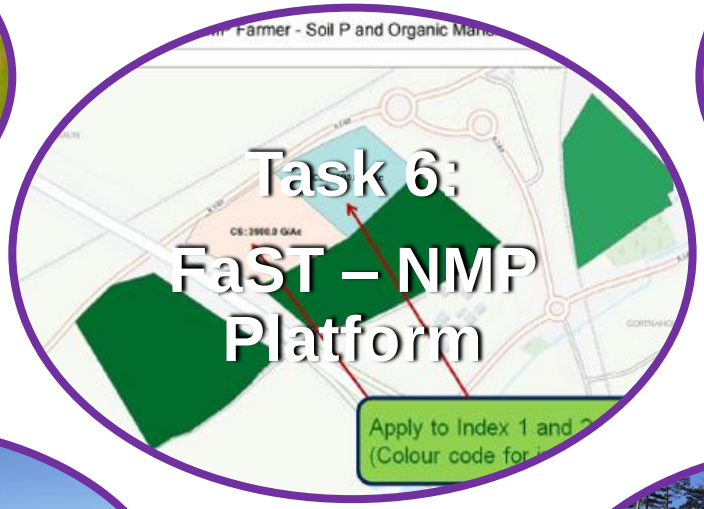

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Summary

- Lime to optimise pH reducing N losses
- Target Soil Fertility at Index 3 for increased NUE
- Adopt lower N input systems e.g. Grass-Clover & Multispecies

Thank You