Signpost Farms: Pointing the way to lower agricultural GHG emissions

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Presentation Overview

- Introduction
- Results
  - Dairy
  - Cattle
  - Sheep
  - Tillage
- On-farm research projects
- Next steps
- Summary

Thank You!

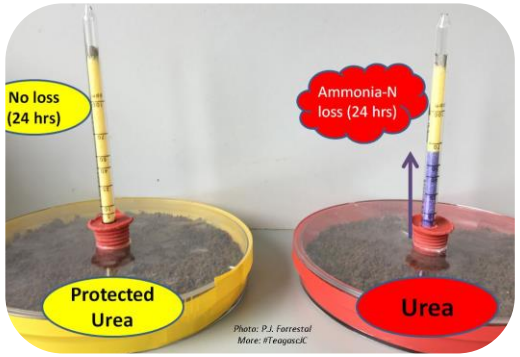
Our Partners

Government, State Agencies and Sponsors

Supporters

Signpost Farms Programme

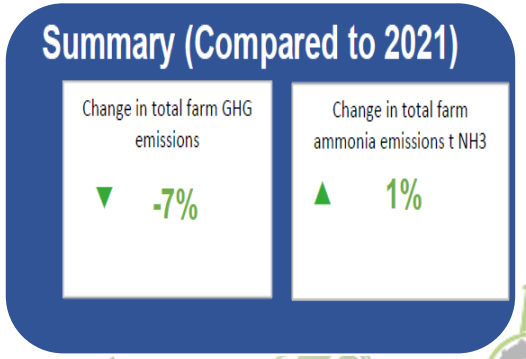
125 Signpost Farmers



Incorporate climate mitigation technologies

Share their experiences

Take part in research projects



Collect data to track progress (NFS)

Since our last General Assembly…..

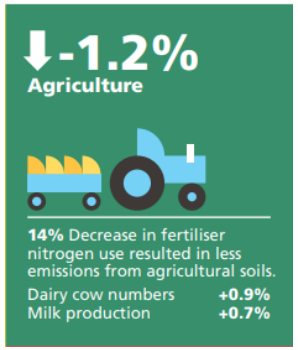
Climate Action Plan 2023

Teagasc Climate Centre

Signpost Advisory Programme

AgNav

EPA GHG Report 2022



MACC3 Launch

Protected urea

9% of N sales (2022)

Fertiliser N Sales

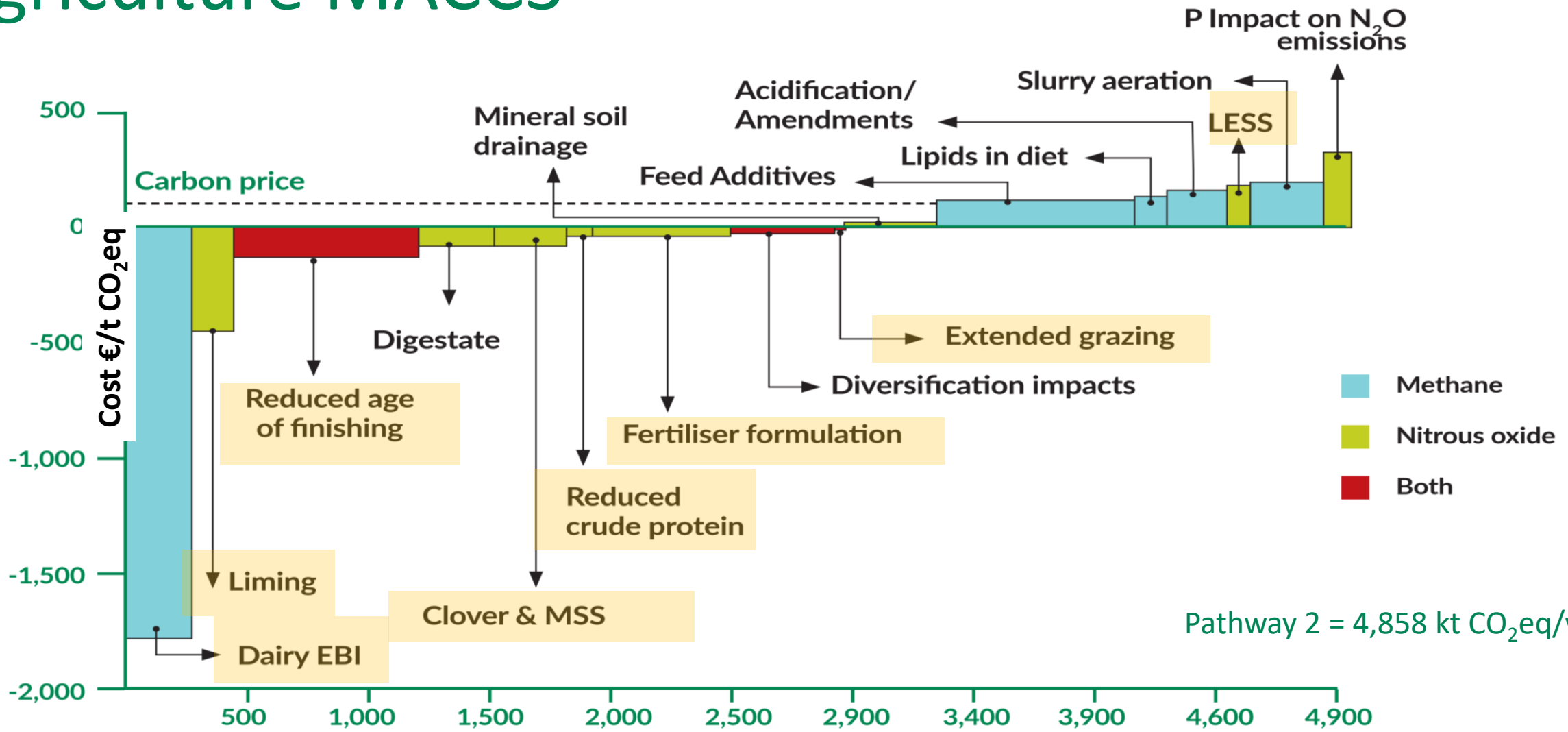
↓ 14% (2022)

Lime use 1.4 mt (2022)

Age at finishing

↓ since 2011

Agriculture MACC3

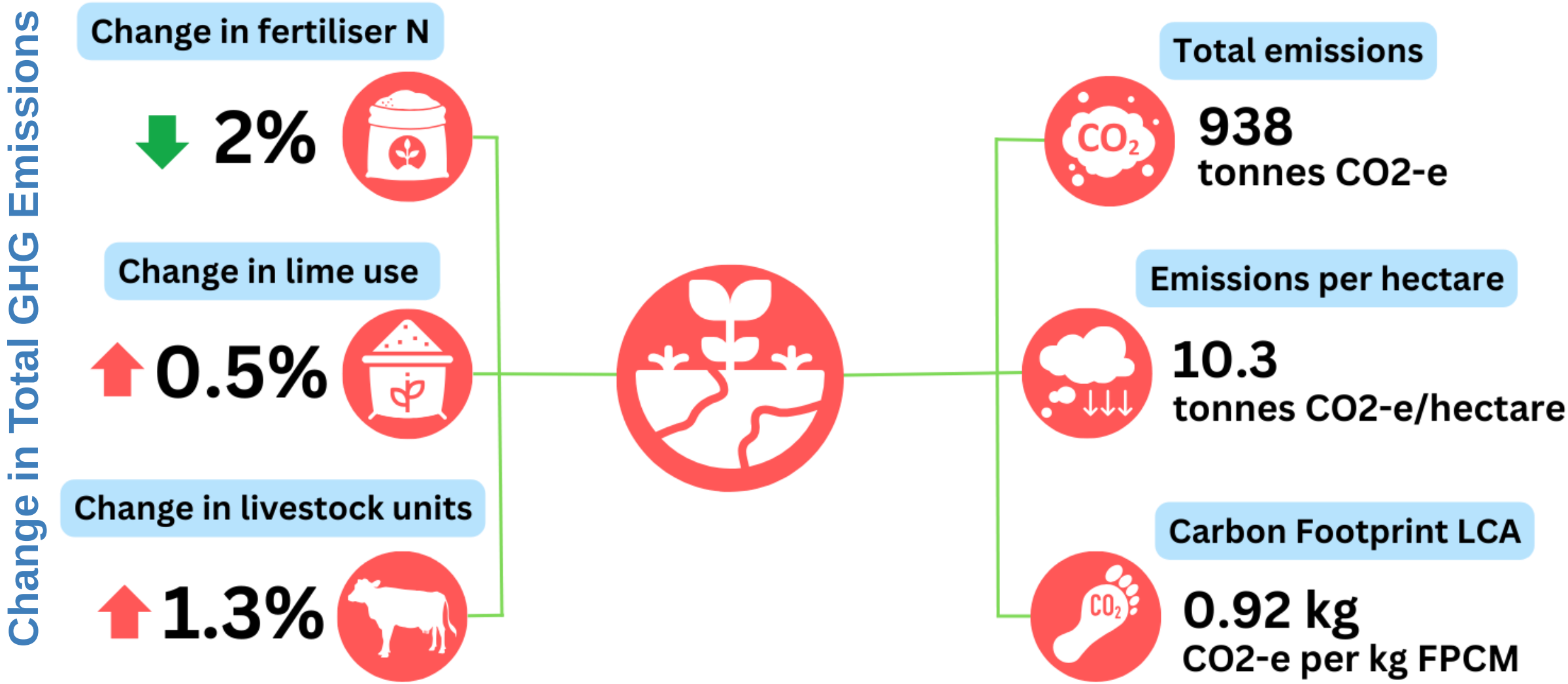


Pathway 2 = 4,858 kt CO_2eq/yr

Signpost Dairy Farms (n=44)

	2021	2022	
	Signpost Dairy	Signpost Dairy	National Farm Survey
% fertiliser N as protected urea	49%	51%	14%
Lime usage, tonnes applied per ha farmed	0.76	0.86	0.45
% slurry spread as LESS	91%	99%	75%
Fertiliser N applied	204	170 (-17%)	159 (-5%)
% farm area with clover	-	48%	-
No. days grazing	256	257	236
Physical changes: Land farmed ↑2%; livestock units ↑ 2%; milk sales ↑ 3%			

Drivers of change - Dairy



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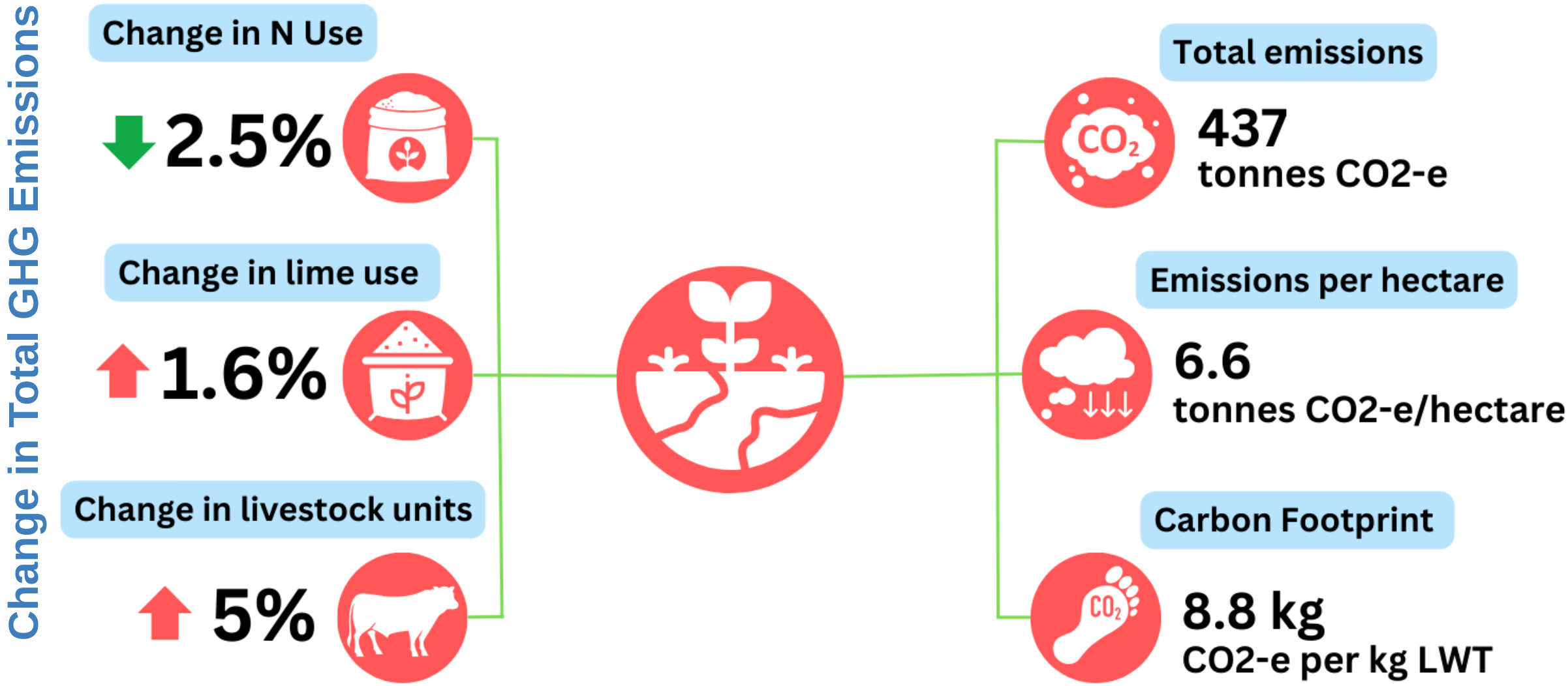
Signpost Cattle Farms (n=35)

	2021		2022			
	Signpost Cattle		Signpost Cattle		National Farm Survey/ ICBF	
% fertiliser N as protected urea	19%		38%		4%	
Lime usage, tonnes applied per ha farmed	0.42		0.61		0.30	
% slurry spread as LESS	40%		79%		33%	
Fertiliser N applied	108		93 (-14%)		44	
% farm area with clover	-		82%*		-	
Age at finishing	Y. Bull	16.6 mths	Y. Bull	16.4 mths	Y. Bull	19.1 mths
	Steers	24.0 mths	Steers	23.9 mths	Steers	26.8 mths
	Heifers	23.3 mths	Heifers	21.8 mths	Heifers	25.6 mths
Physical changes: Area farmed +4%; livestock units +5%						

Drivers of change - Cattle



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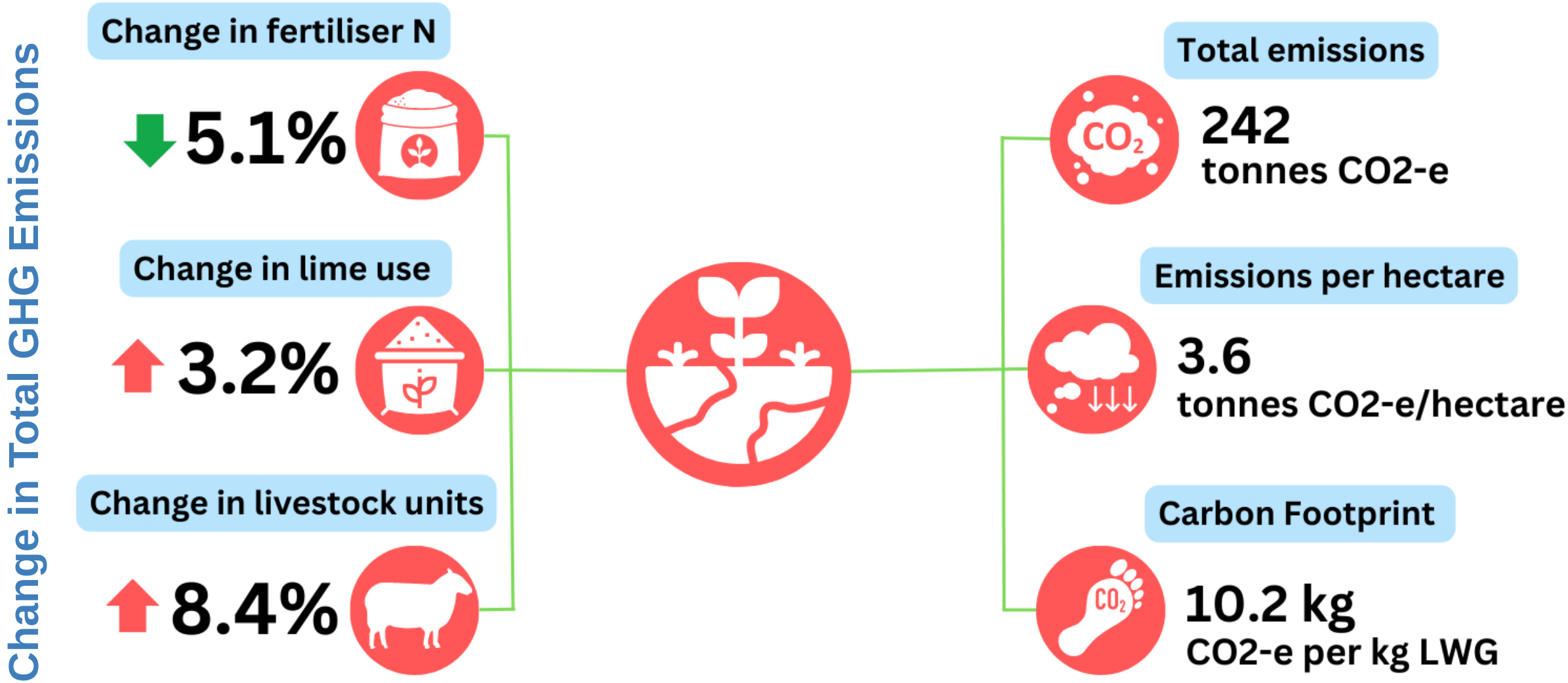
Signpost Sheep Farms (n=7)

	2021	2022	
	Signpost Sheep	Signpost Sheep	National Farm Survey
% fertiliser N as protected urea	20%	19%	2%
Lime usage, tonnes applied per ha farmed	0.38	0.56	0.25
% slurry spread as LESS	50%	33%	18%
Fertiliser N applied	84	66	43
Physical changes: Area farmed +0.5%; livestock numbers +7%			

Drivers of change - Sheep



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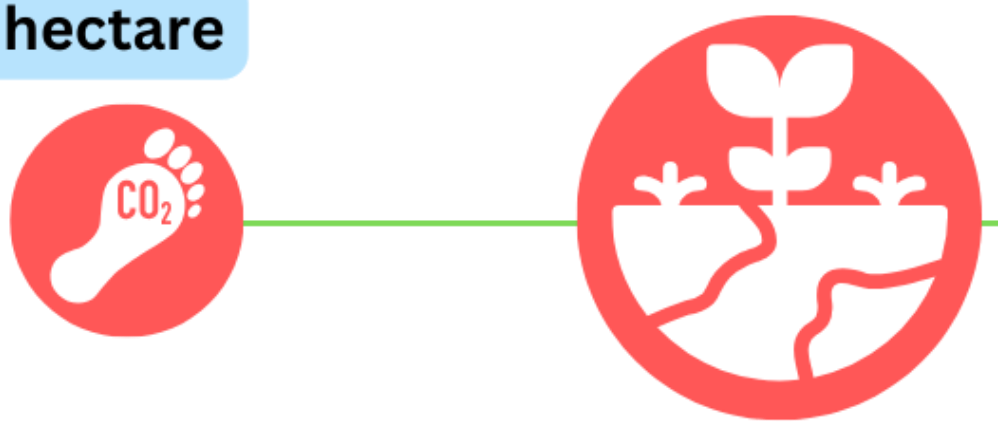
Signpost Tillage Farms (n=9)

	2021	2022	
	Signpost Tillage	Signpost Tillage	National Farm Survey
Winter crops	59%	60%	
Spring crops	41%	40%	
% fertiliser N as protected urea	0	26%	4%
Fertiliser N applied	156	137	88*
Organic manures used (total tonnes imported)	4,582	5,879	
Straw incorporation % area farmed	23%	20%	
Cover crops % area farmed	25%	17%	
Legumes % area farmed	9%	12%	
Physical changes: None			

GHG emissions - Tillage

Emissions per hectare

0.90 t
CO2-e / ha



Total emissions

117 t
CO2-e

Soil Carbon Project, NASCO and LiDAR

Next Steps

1. Use farmer reports to identify areas for further improvement
2. Continue to focus on MACC measures
3. Run on-farm pilot demo of feed additives…winter 2023
4. Integrate other results, including carbon sequestration in soil, hedgerows and forestry…to provide “net emissions” figure
5. Share details with other farmers through Signpost Advisory Programme

Summary

- Progress made in adopting MACC measures across all Signpost Farms
- Signpost Farmers are producing milk, meat and grains with a lower carbon footprint than reported for the average Irish farmer, showing what is possible for all farmers
- Signpost Farmers can make further progress in reducing emissions, and can show the way forward for other farmers