TEAGASC RESEARCH INSIGHTS

LEADING RESEARCH FOR TOMORROW'S AGRI-FOOD SYSTEMS

Benefits of White Clover in sheep production systems

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Overview

- Current industry performance and targets
- Role for white clover in sheep systems
- Current Research
- Key findings to date

Key performance indicators in Irish mid-season lamb production systems

	National average
Stocking rate (ewes/ha)	7.8
Lambs weaned/ewe	1.4
Carcass output/ha	225
Nitrogen used (kg/ha)	73
Grass utilised/ha (kg DM)	5600
Net Margin/ha (€)**	149

** Excluding Direct payments

(Teagasc NFS data 2017-2019)

Key performance indicators in Irish mid-season lamb production systems

	National average	Achieved at Research Level
Stocking rate (ewes/ha)	7.8	12
Lambs weaned/ewe	1.4	1.75
Carcass output/ha	225	420
Nitrogen used (kg/ha)	73	145
Grass utilised/ha (kg DM)	5600	10000
Net Margin/ha (€)**	149	630

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(Teagasc NFS data 2017-2019)

(Earle et al. 2018)

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Chemical N reduction

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- An evaluation of incorporating white clover into sheep grazed swards at two fertiliser N and SR levels on the productivity of pasture based lamb production systems

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  - High 13 ewes/ha (2.6L.U/ha)

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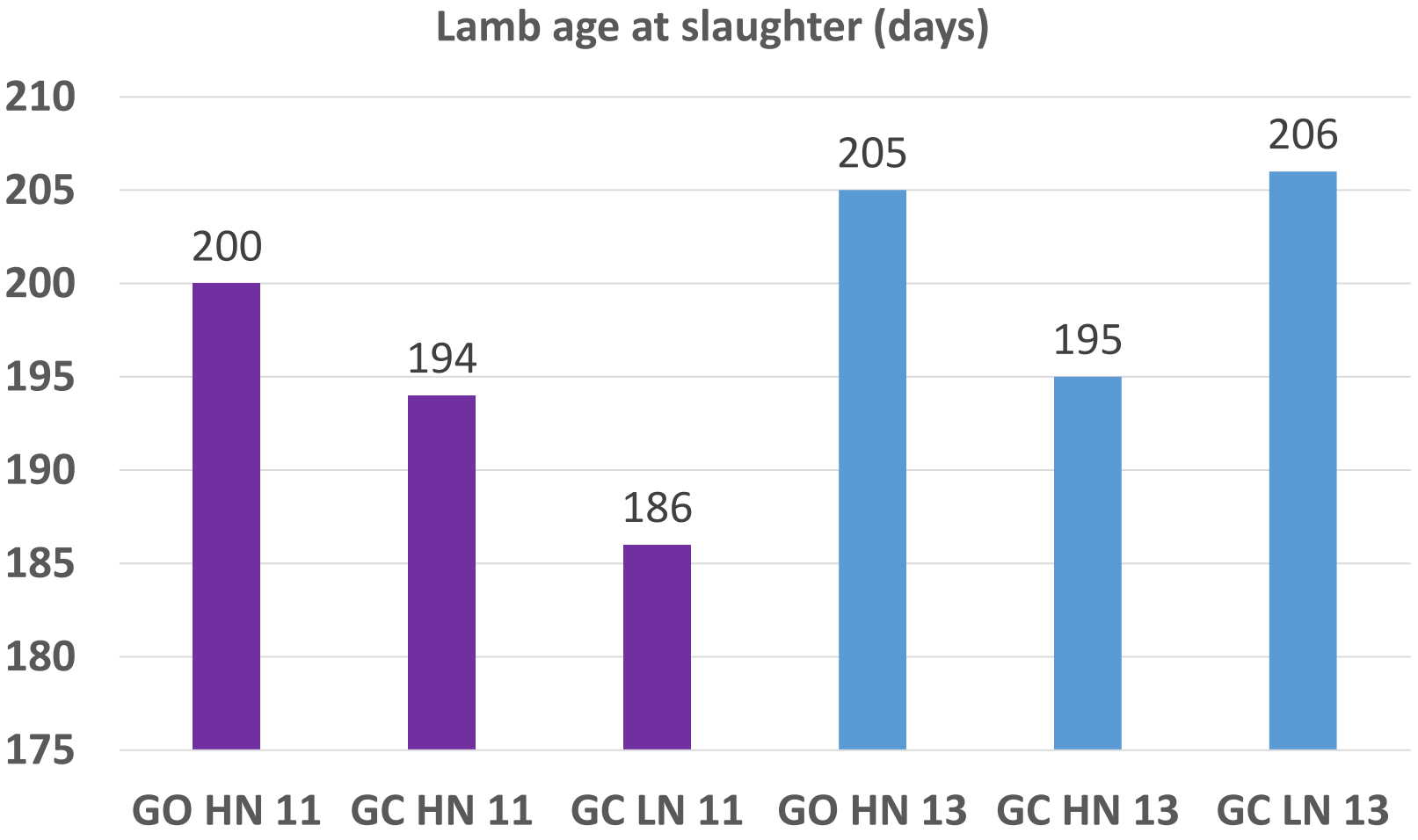
- 2 stocking rates
  - Medium 11 ewes/ha (2.2L.U/ha)
  - High 13 ewes/ha (2.6L.U/ha)

- 3 pasture treatments
  - Grass only (145 kg N/ha, GO HN)
  - Grass + WC (145 kg N/ha, GC HN)
  - Grass + WC (90 kg N/ha, GC LN)

Animal Performance



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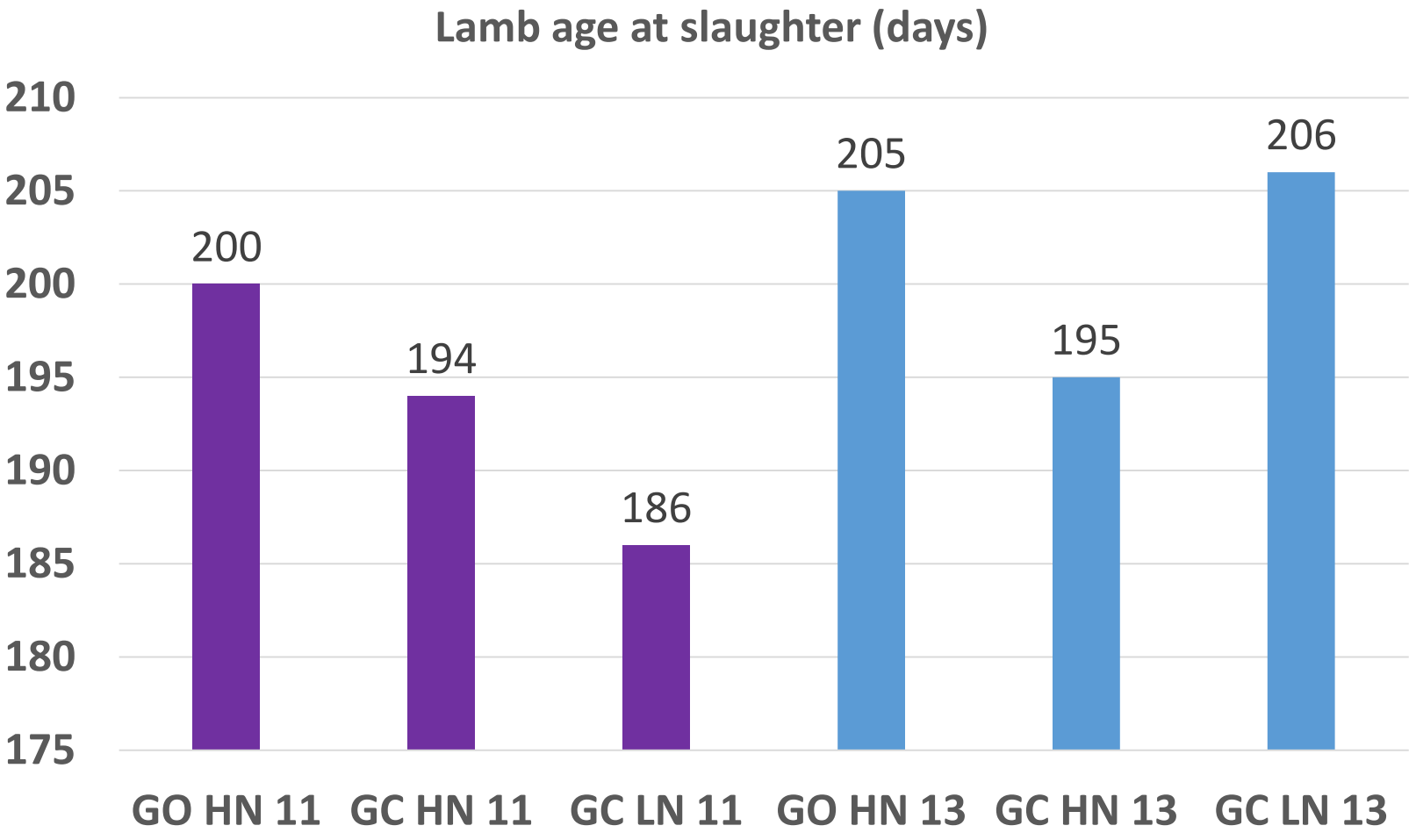
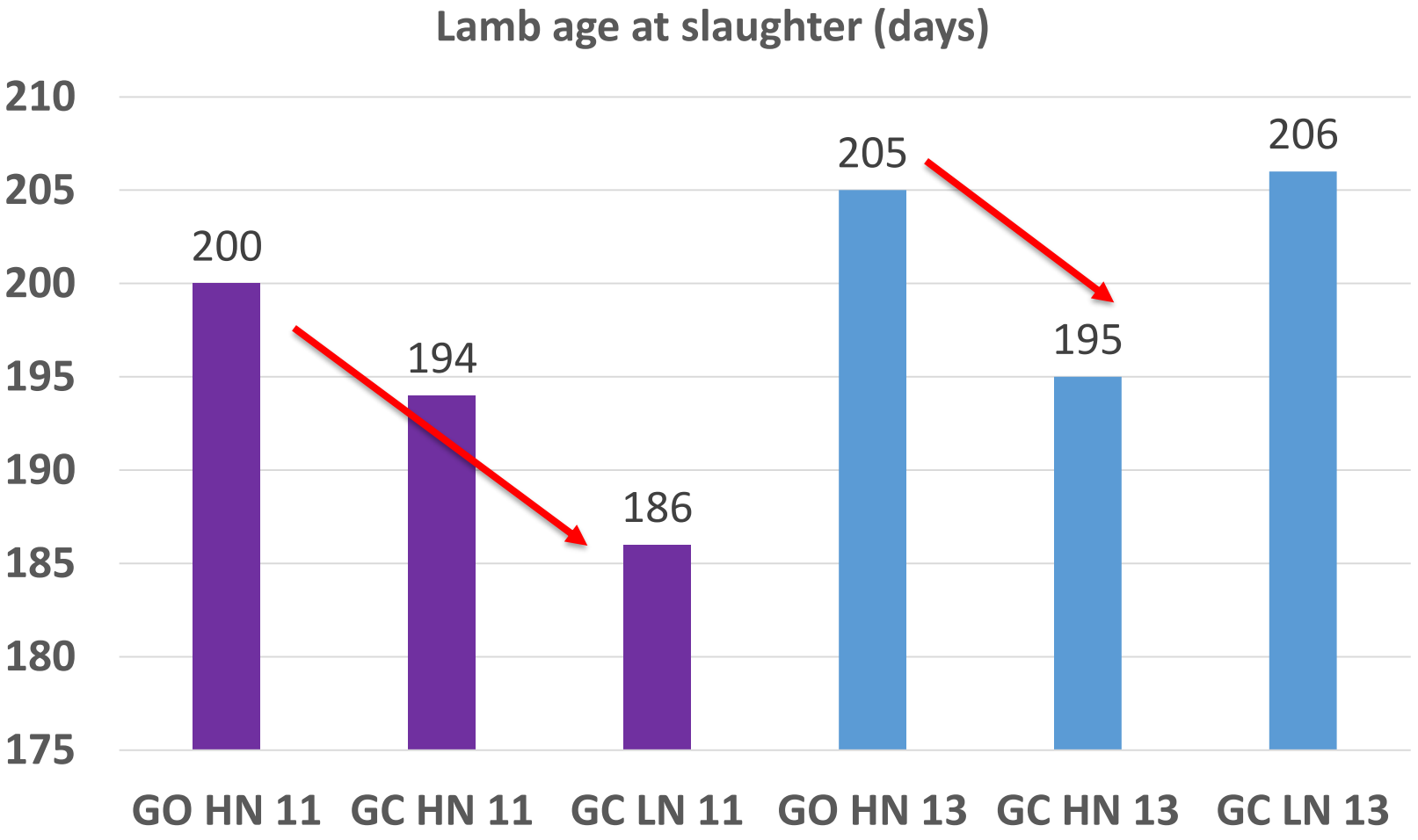


+ 10-15g/day ADG post weaning

Animal Performance



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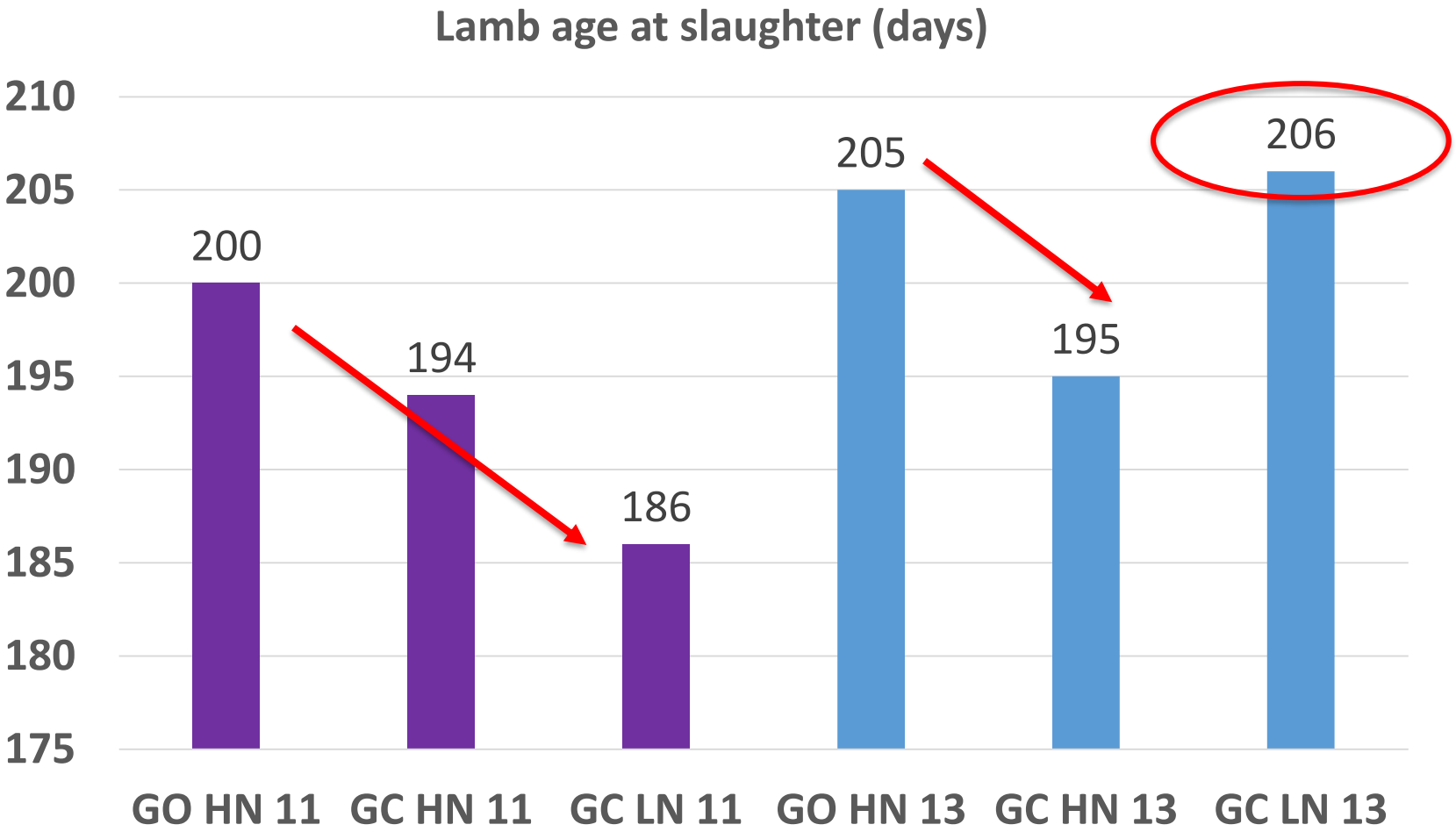

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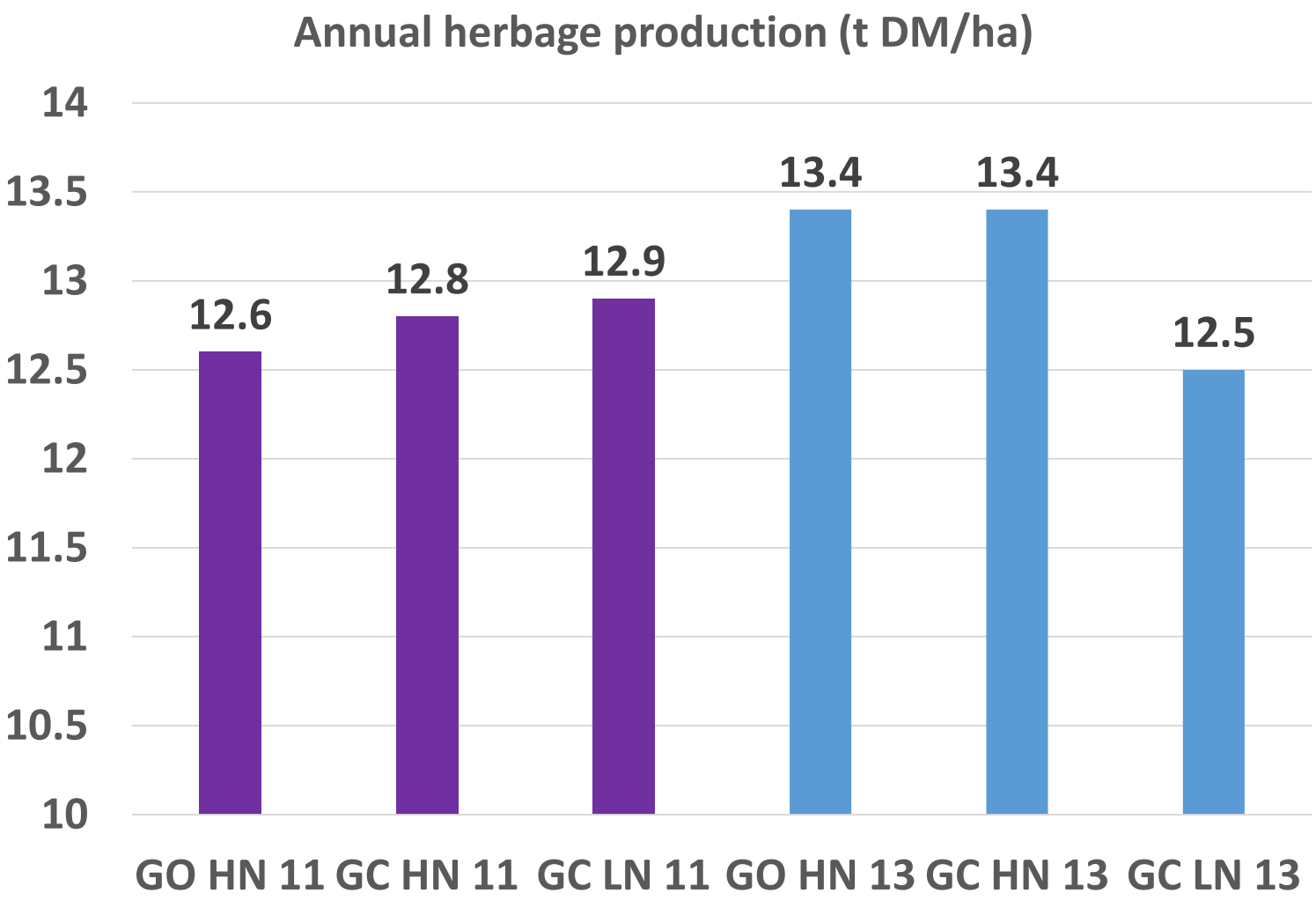
Herbage Production



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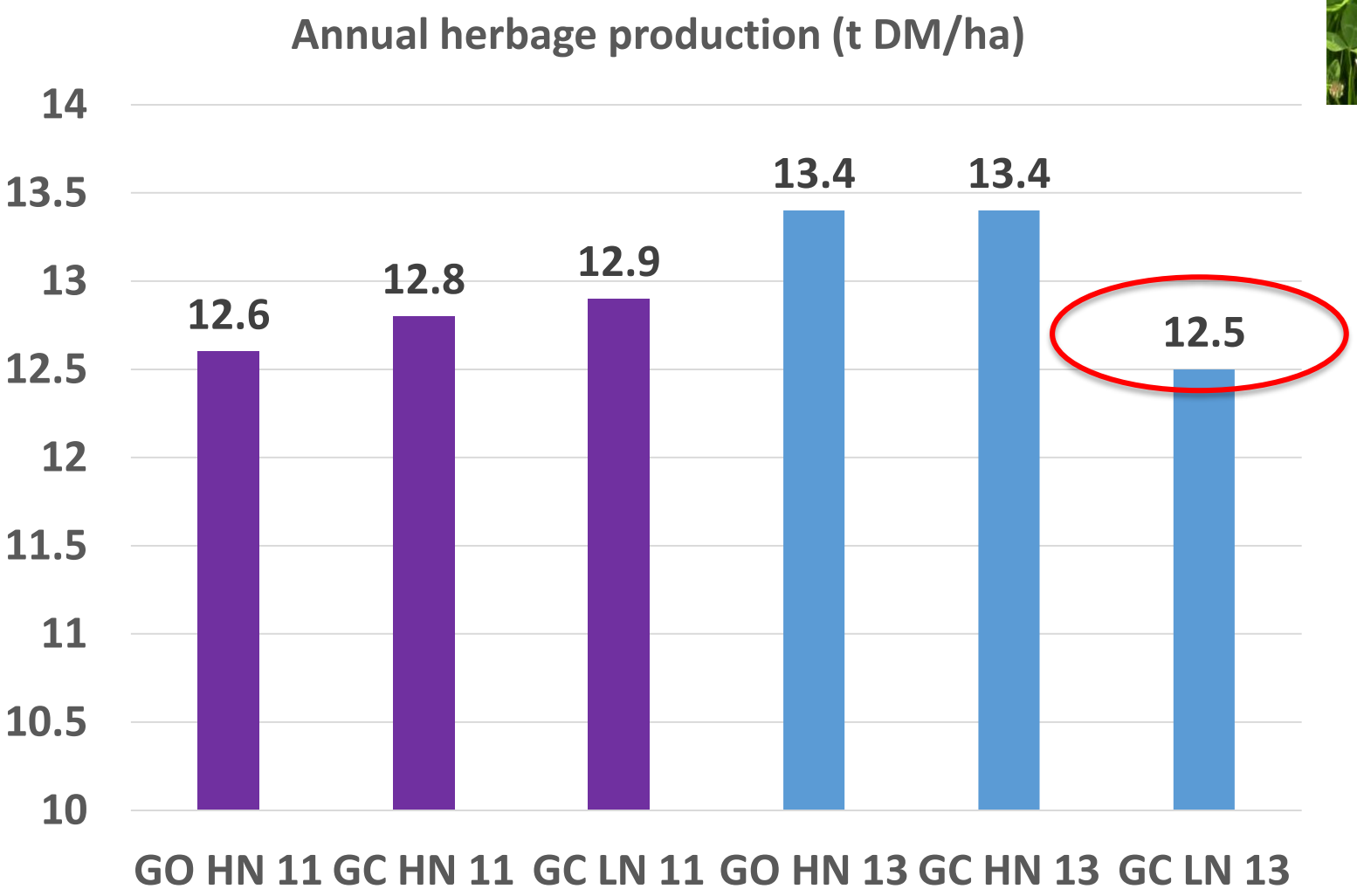

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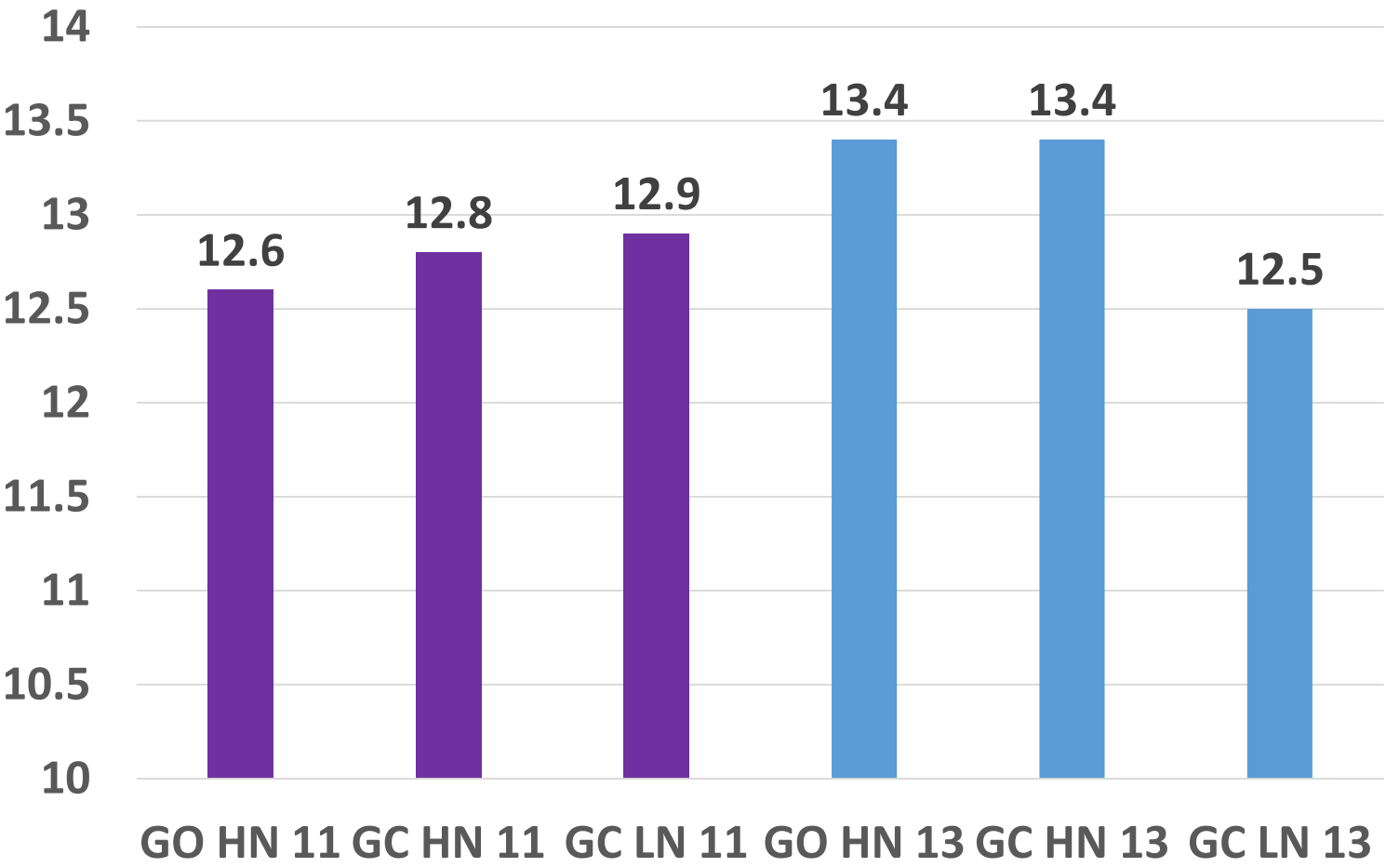

Average sward clover content (%)

SR	145 Kg HN	90Kg LN
11 ewe/ha	12.3	14.3
13 ewe/ha	14.3	12.6

- Small leaf clover varieties used
- Avg values post weaning period

Chemical N reduction

	HN	LN
Date (rotation)	**N application (kg N/ha)**	**N application (kg N/ha)**
Early-Mid Feb	25	20
April	25	20
May	25	12
June	18	12
July	14	
August	14	12
Early-Sept	24	14
Total	**145**	**90**

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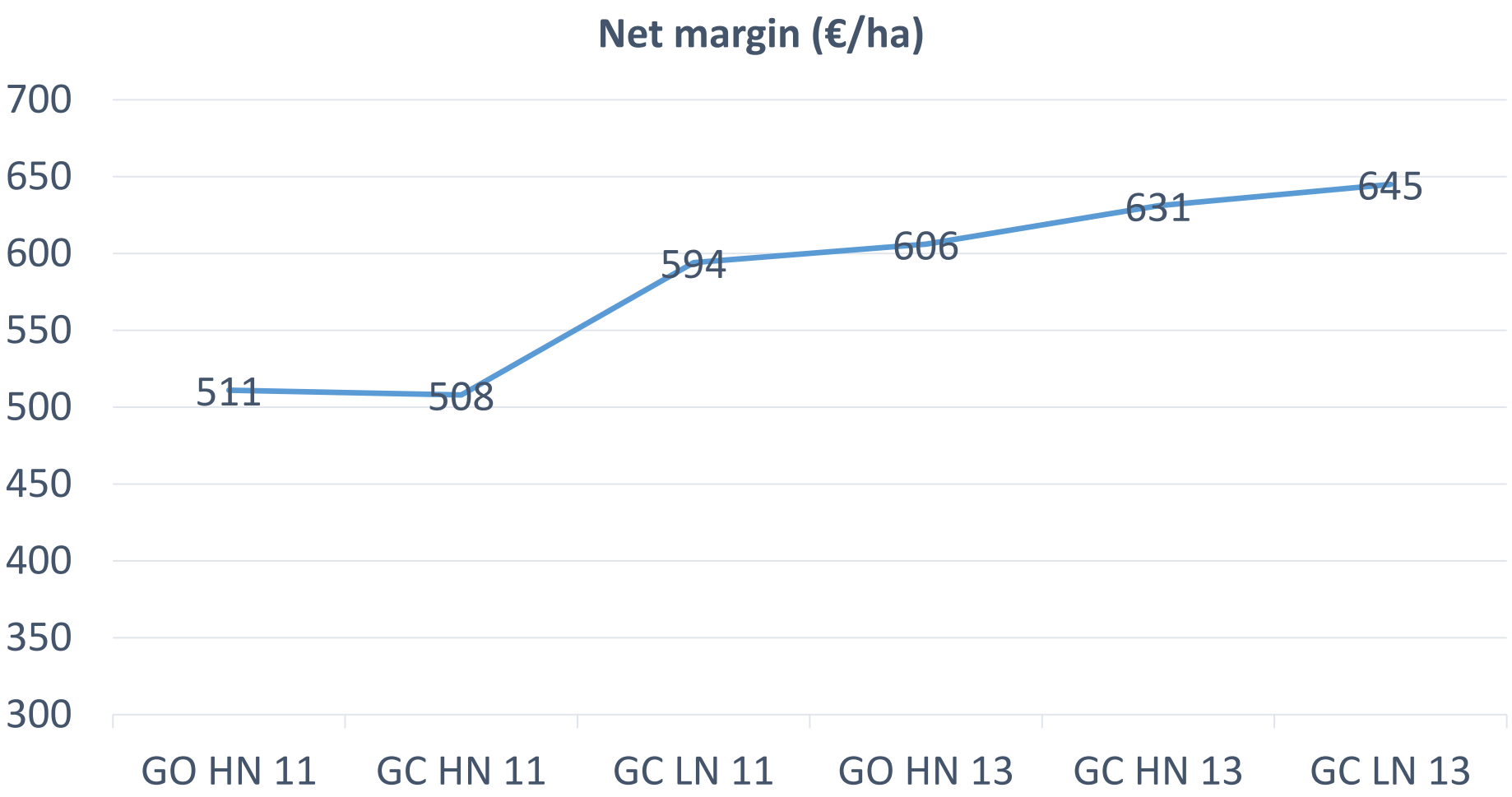
- **40% Lower N application**
  - **Similar herbage Production**
- **Further Work required**
  - **Application timing**
  - **Distribution of growth**
  - **Higher Stocking rates**

Financial



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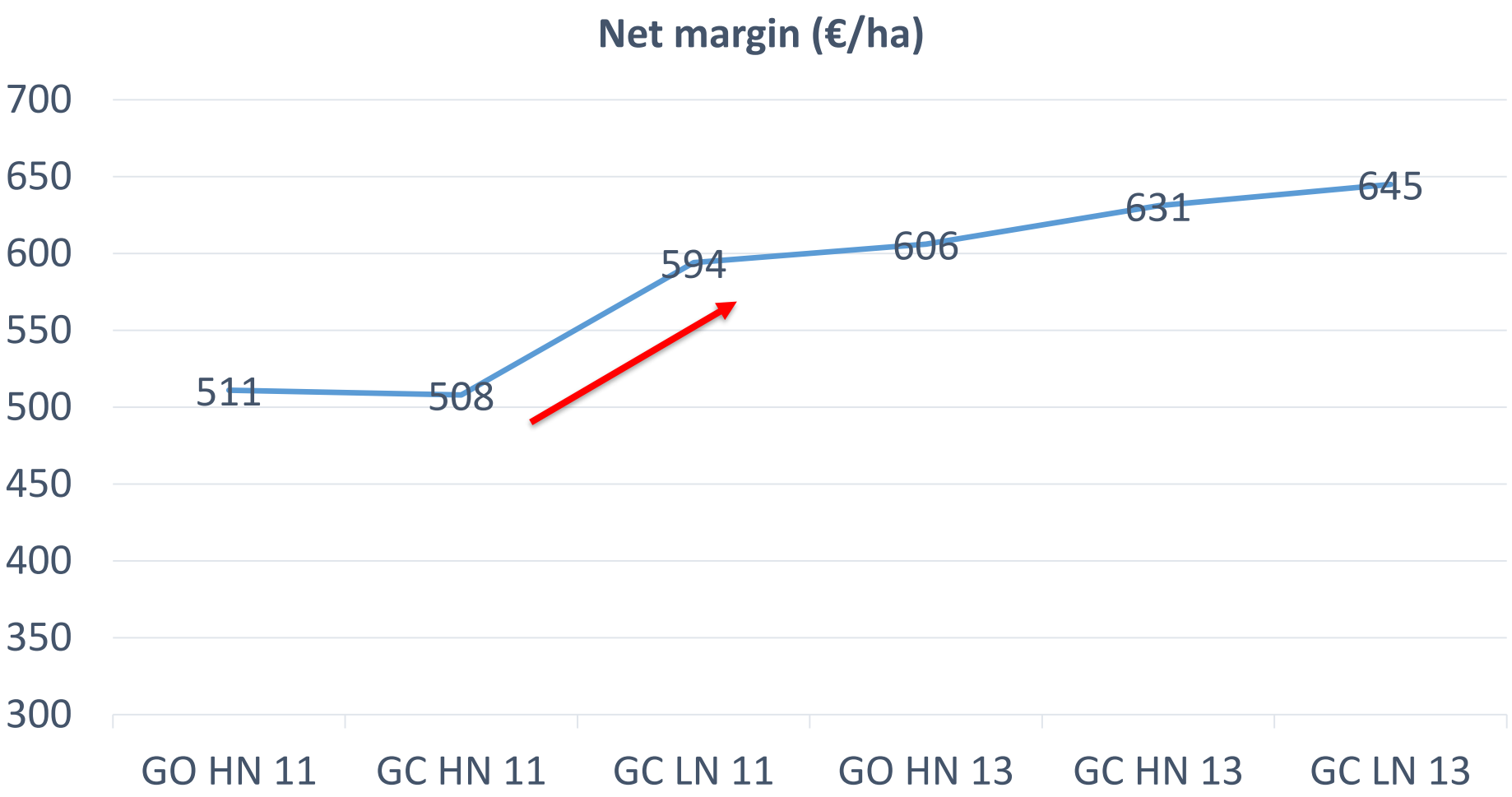

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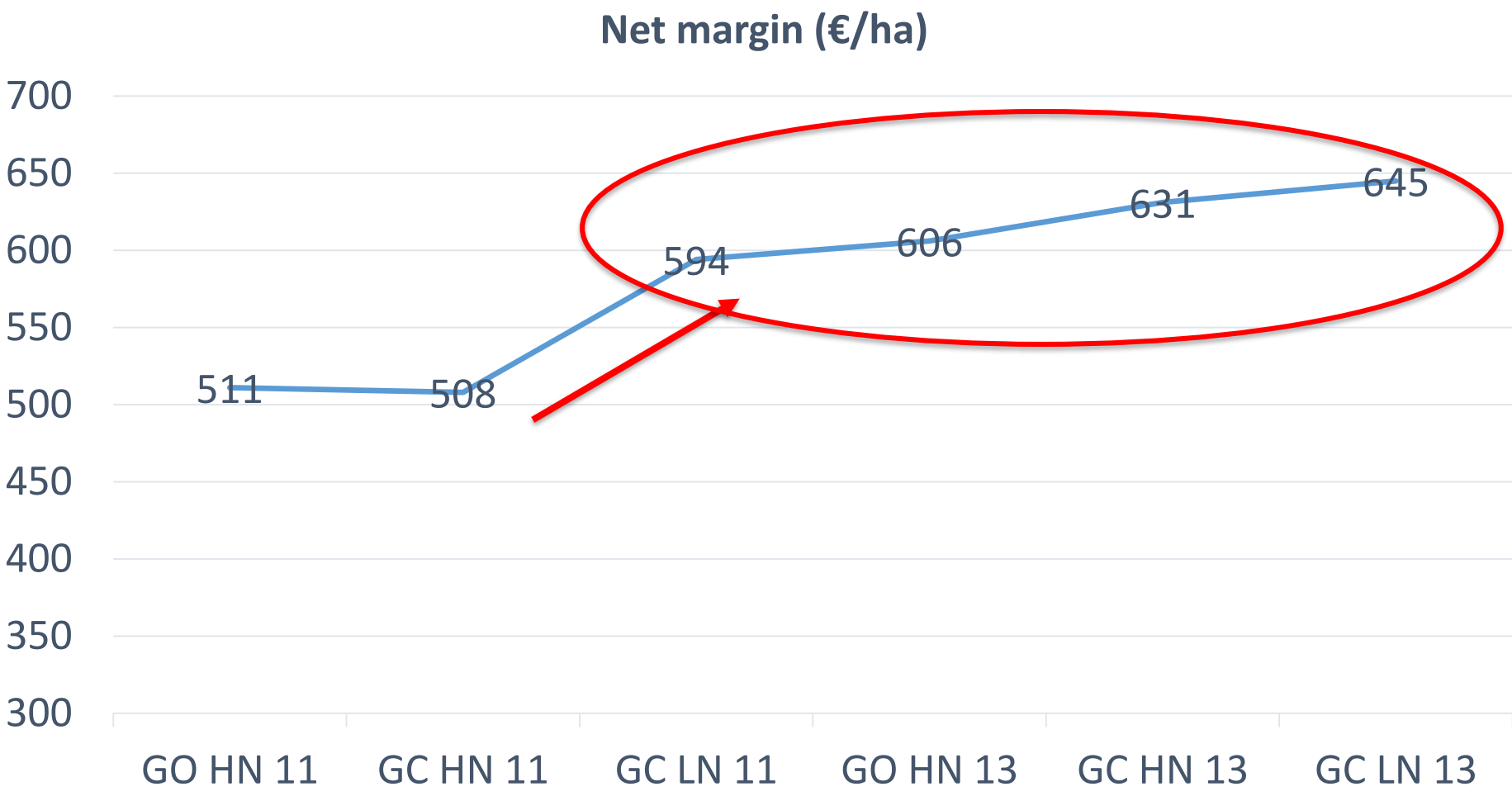

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- Grass - white clover swards require less chemical N compared to grass only swards

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- Incorporating white clover into sheep grazed swards can reduce lamb days to slaughter
- Grass - white clover swards require less chemical N compared to grass only swards
- High levels of output and profitability can be maintained from grass-white clover swards

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