

Strategies to reduce GHG

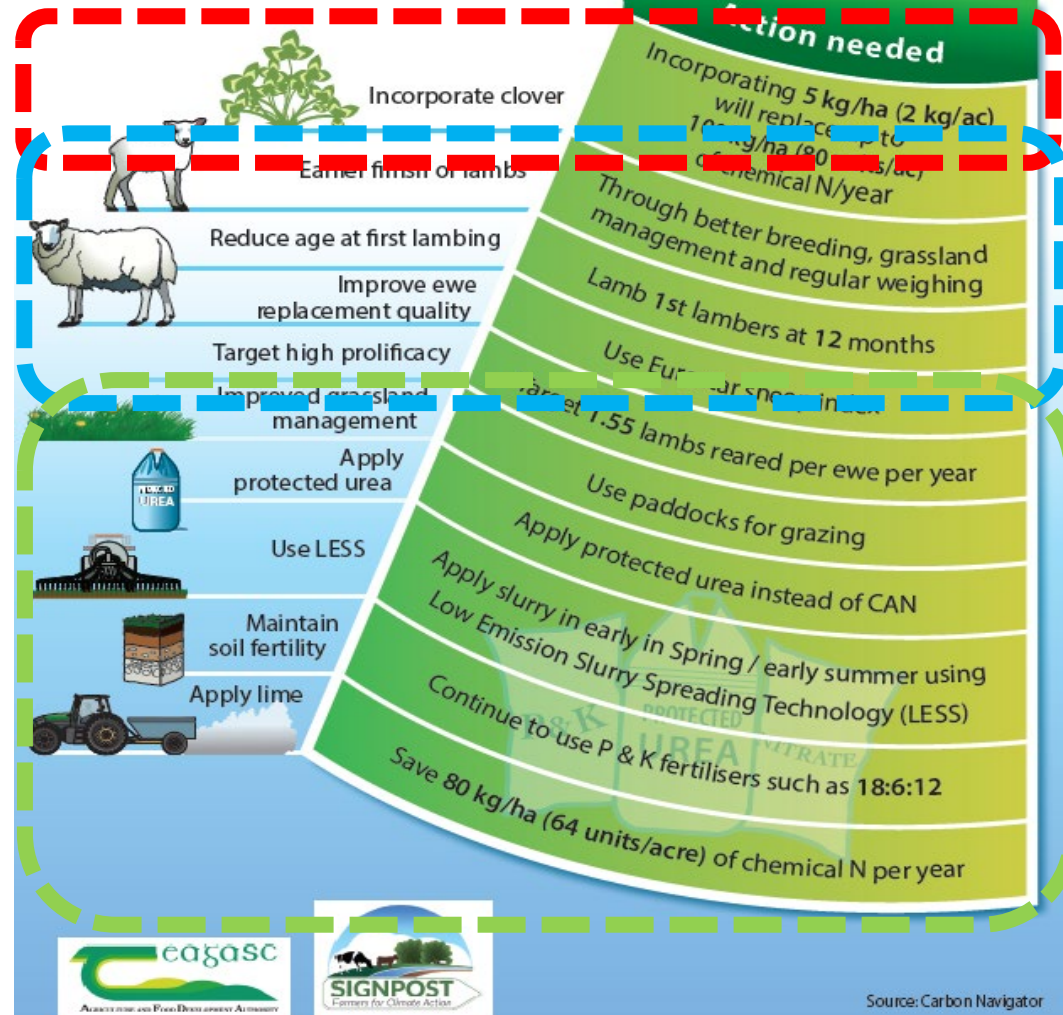
Where are you on the 10 Steps to Reduce Emissions of YOUR FARM?



Diet

Breeding

Management



Breeding

Stocking Rate x Prolificacy

Low

Medium

High

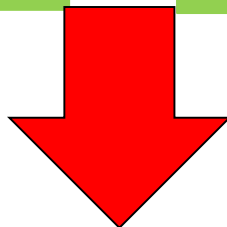
10 ewes/ha



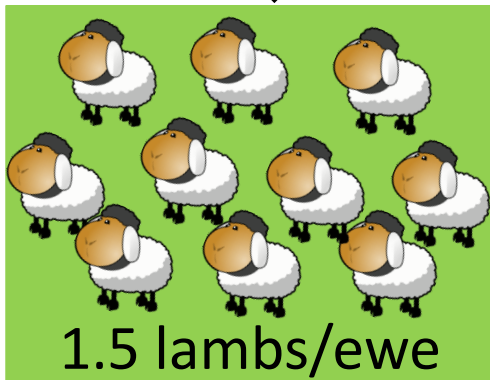
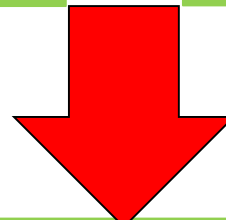
12 ewes/ha



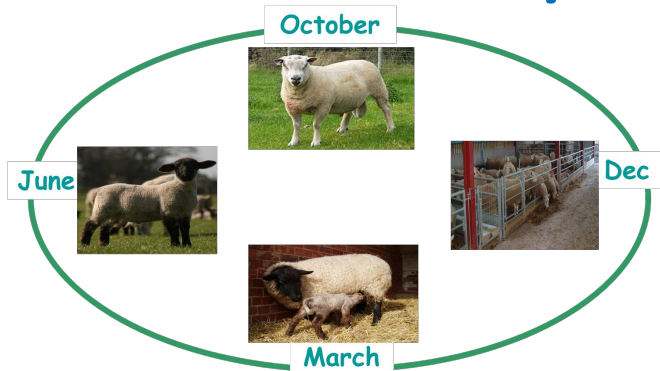
14 ewes/ha



X



System Performance



Weaning rate (lambs/ewe)	1.5			1.8		
Stocking rate (ewes per ha)	10	12	14	10	12	14
Land area (ha)	20	20	20	20	20	20
Ewes bred	213	256	294	215	259	299
Nitrogen use (kg N/ha)	113	145	181	113	145	181
Performance						
Lambs born (March)	363	441	529	464	542	631
Lambs weaned (June)	320	385	440	387	468	538
Lambs drafted (June- January)	280	335	399	343	410	479
Birth weight (kg)	5.2	5.1	5.0	4.6	4.8	4.6
Weaning weight (kg)	31.5	32.6	31.3	31.6	28.7	30.5
Lamb carcass weight (kg)	19.5	19.5	19.7	19.9	19.7	19.8
Total carcass sold (kg/ha)	273	327	393	341	403	474
Drafted by 1st October	75%	55%	47%	63%	68%	50%



Teagasc lamb production model

Flock net energy

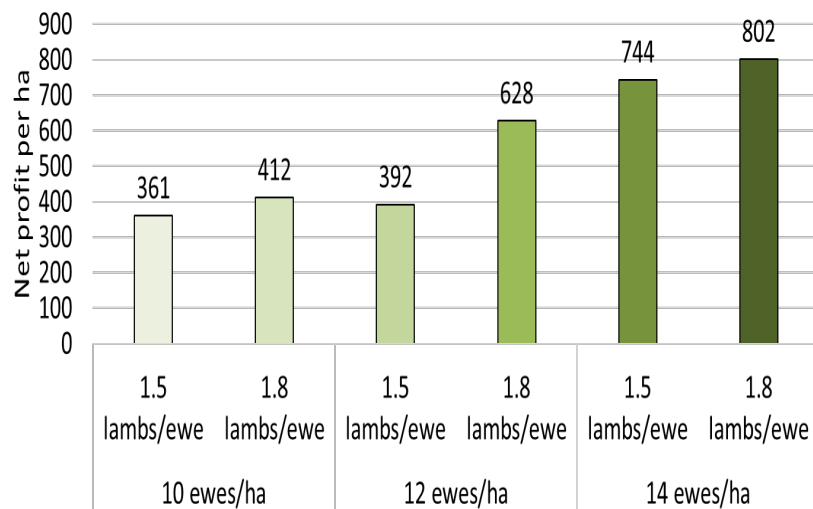


Grass, Silage & Concentrate

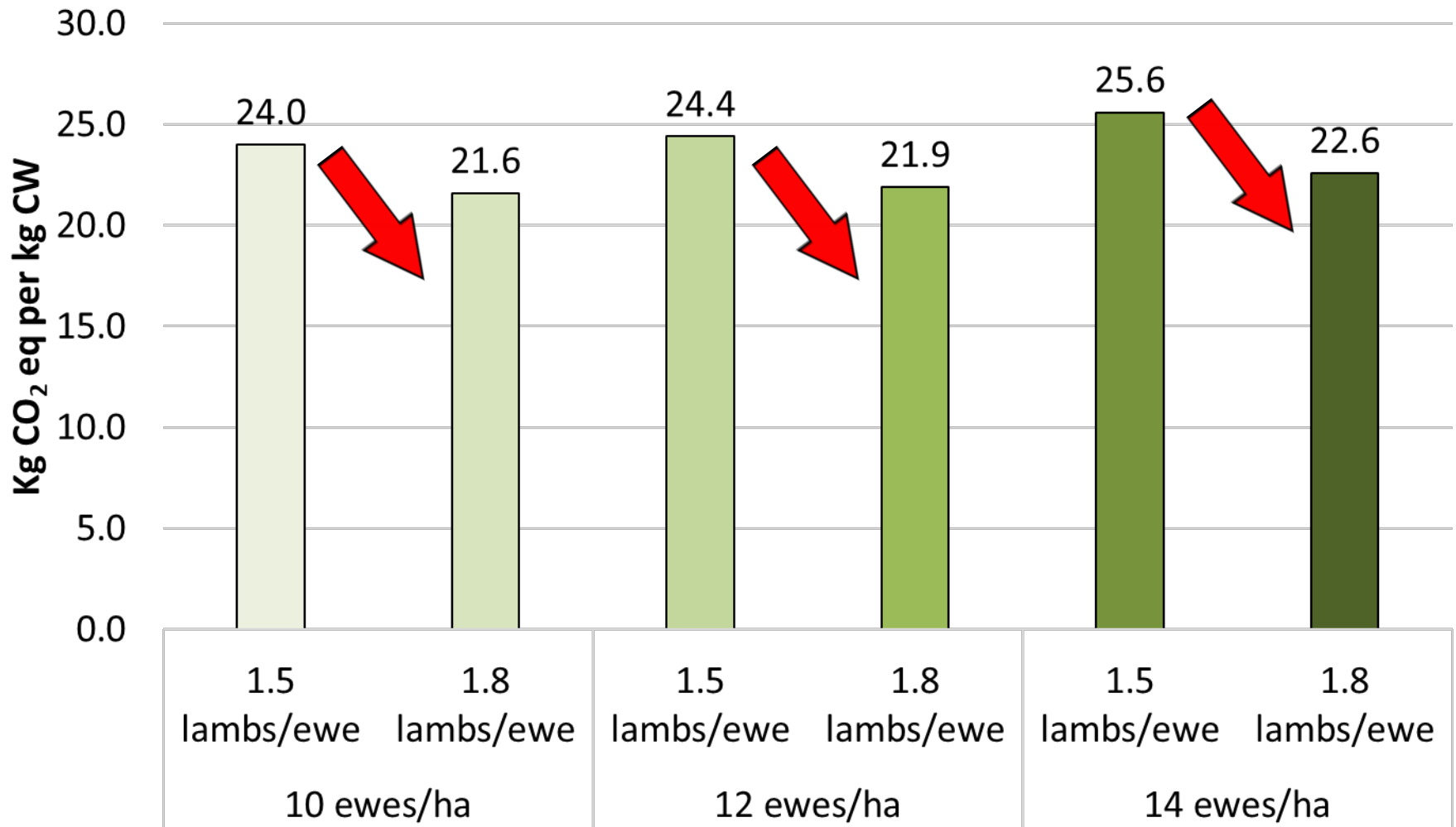
Land
Capital
Labour
Animals
Mortalities
Variable costs
Fixed costs



1. Financial
2. Economic
3. Physical



Greenhouse gas intensity



Using Euro-Star Indexes

1 Star Flock



V's

5 Star Flock



Using CPT
commercial
data

Flock Performance

Weaning rate 1.54 lambs/ewe
Days to slaughter 203 days

Weaning rate 1.70 lambs/ewe
Days to slaughter 190 days

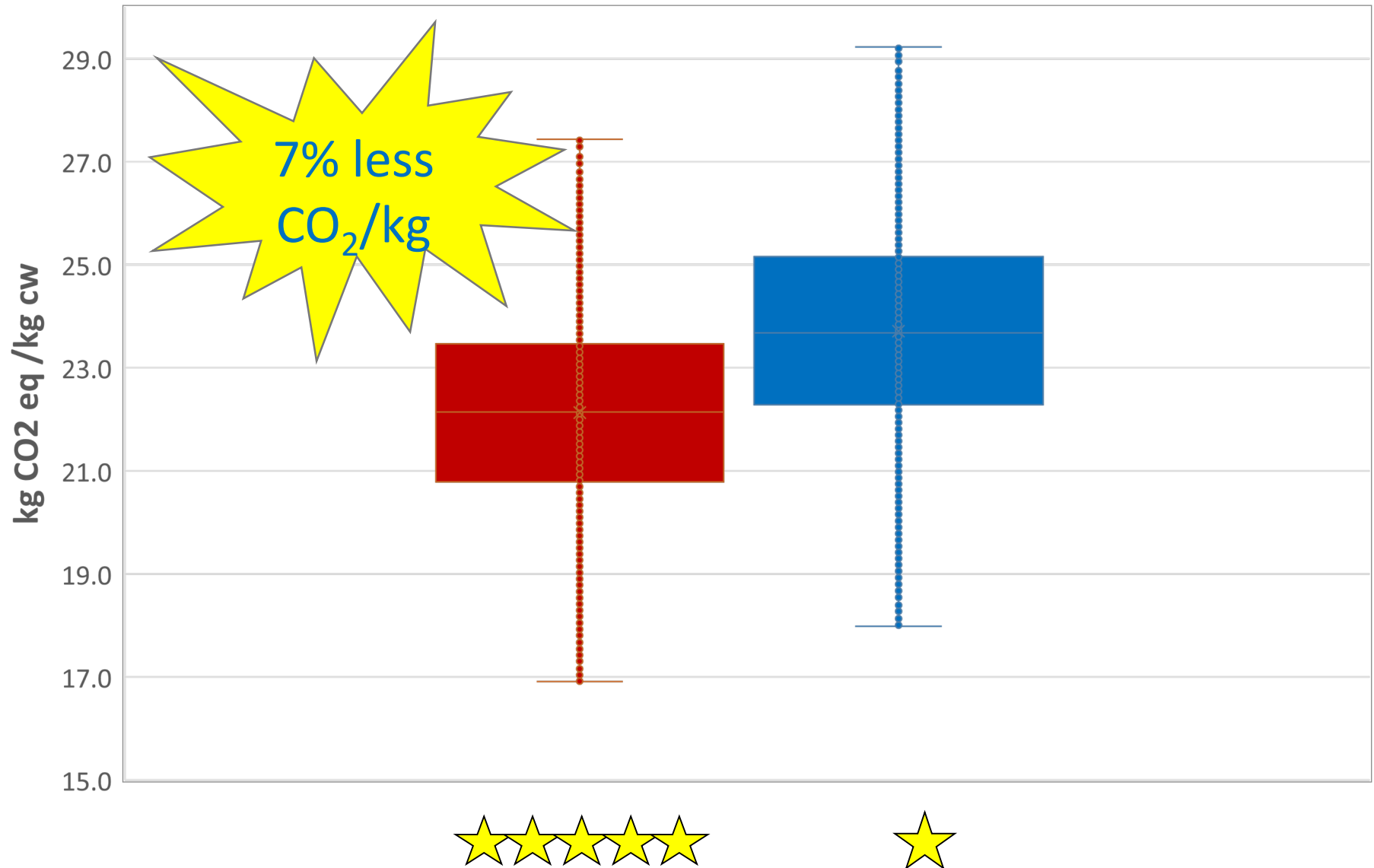
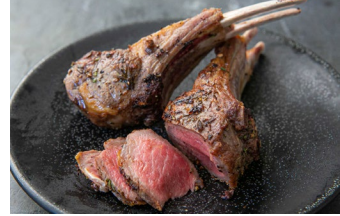
Economics (net profit)

€230 per ha
€27 per ewe

€379 per ha
€45 per ewe

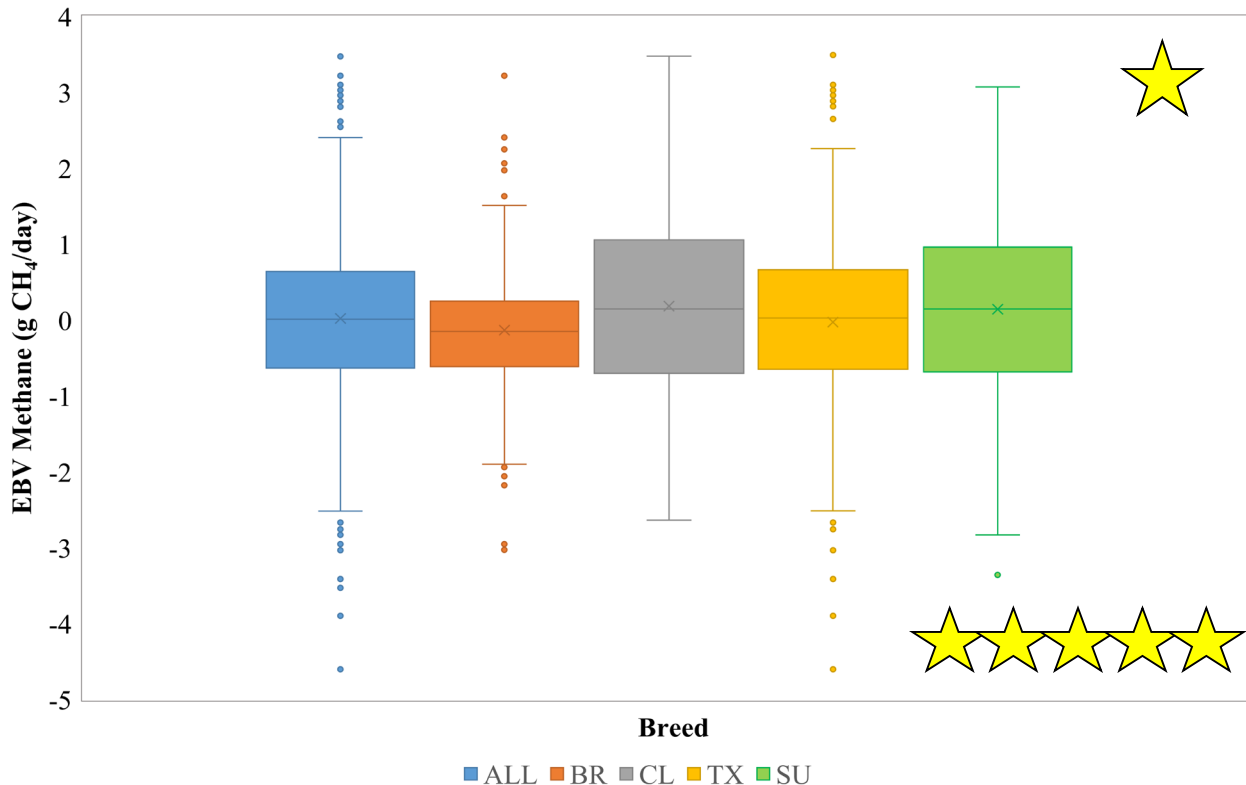
**+€18
per ewe**

Greenhouse gas intensity



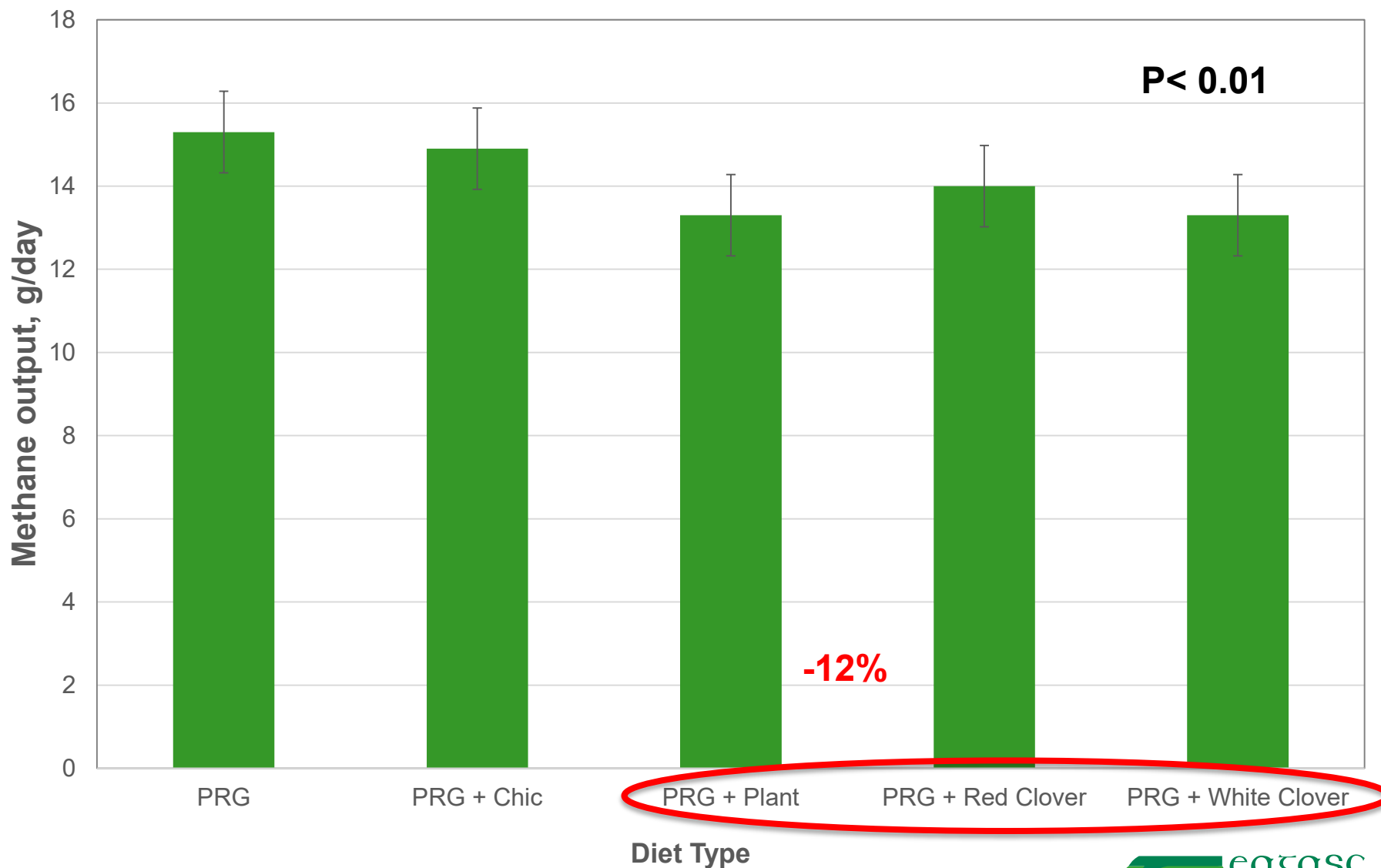
Genetics of methane

- Variation between animals for methane?
- Results to date:
 - Heritable $\rightarrow$ 25%
 - Repeatable $\rightarrow$ 39%



Diet

Methane output



Key messages

- Irish sheep systems:
 - High value, nutritional commodity produced from grass
 - Average carbon footprint 10.8 kg CO₂eq/kg LW
- Methane measurements:
 - PAC validated
 - Baseline sheep methane data
 - Multitude factors affect methane → feed intake & diet type
- Must be proactive in adopting mitigation strategies:
 - Management, breeding & diet



Sheep *Open Day*

Saturday, 18 June | 10am

Teagasc, Athenry, Co. Galway

For more information visit:
www.teagasc.ie/sheepopenday

