



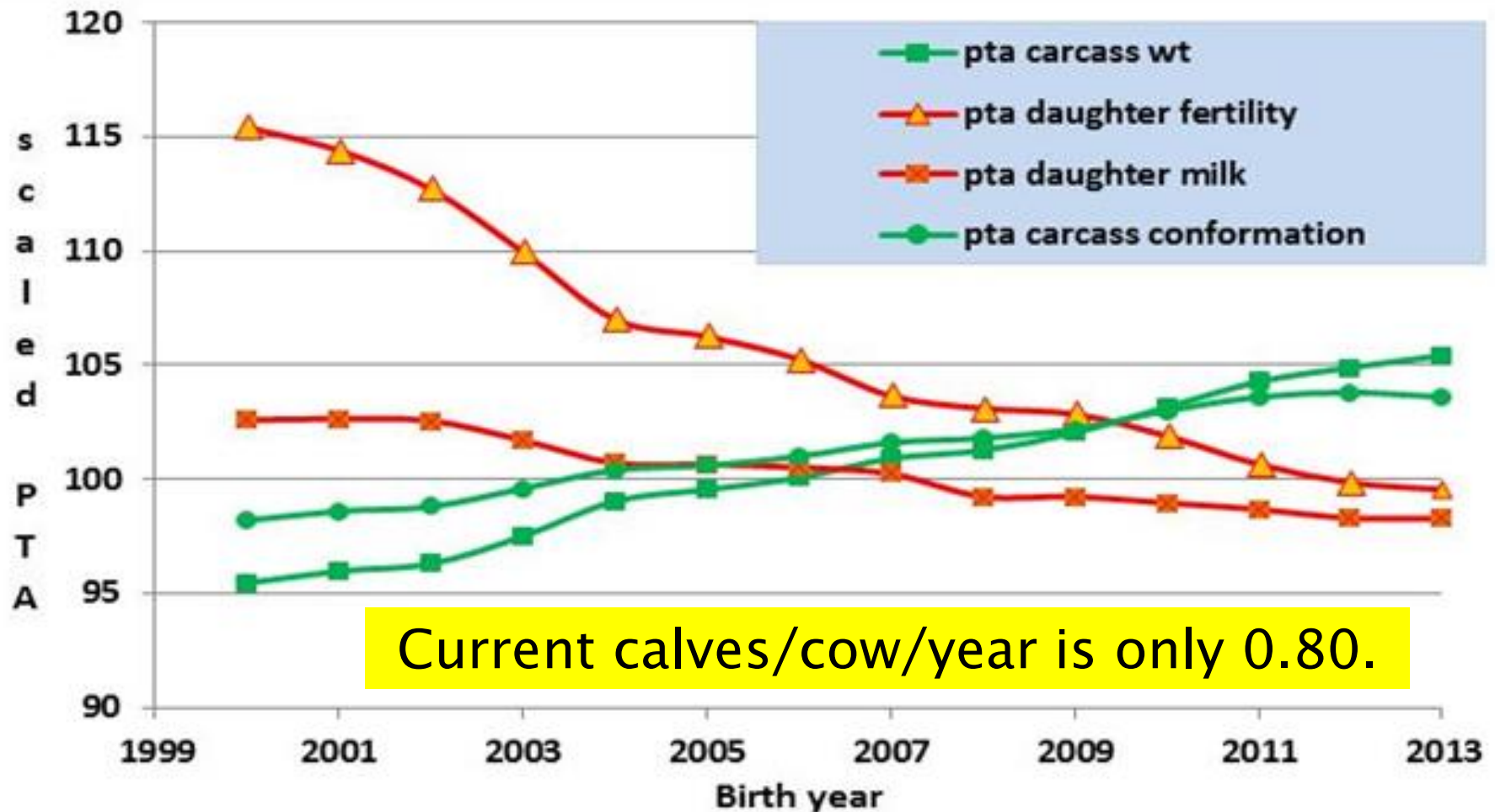
IRISH CATTLE BREEDING FEDERATION

Ireland's Beef Data & Genomics Scheme.

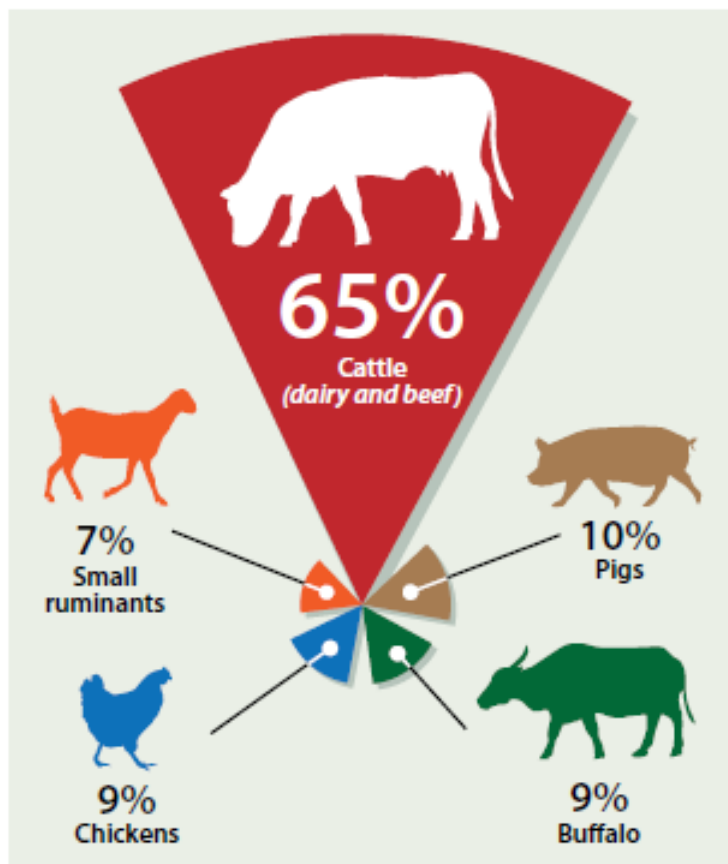


Department of
**Agriculture,
Food and the Marine**
An Roinn
**Talmhaíochta,
Bia agus Mara**

Challenge; past focus on terminal traits => cow herd is not “fit for purpose”



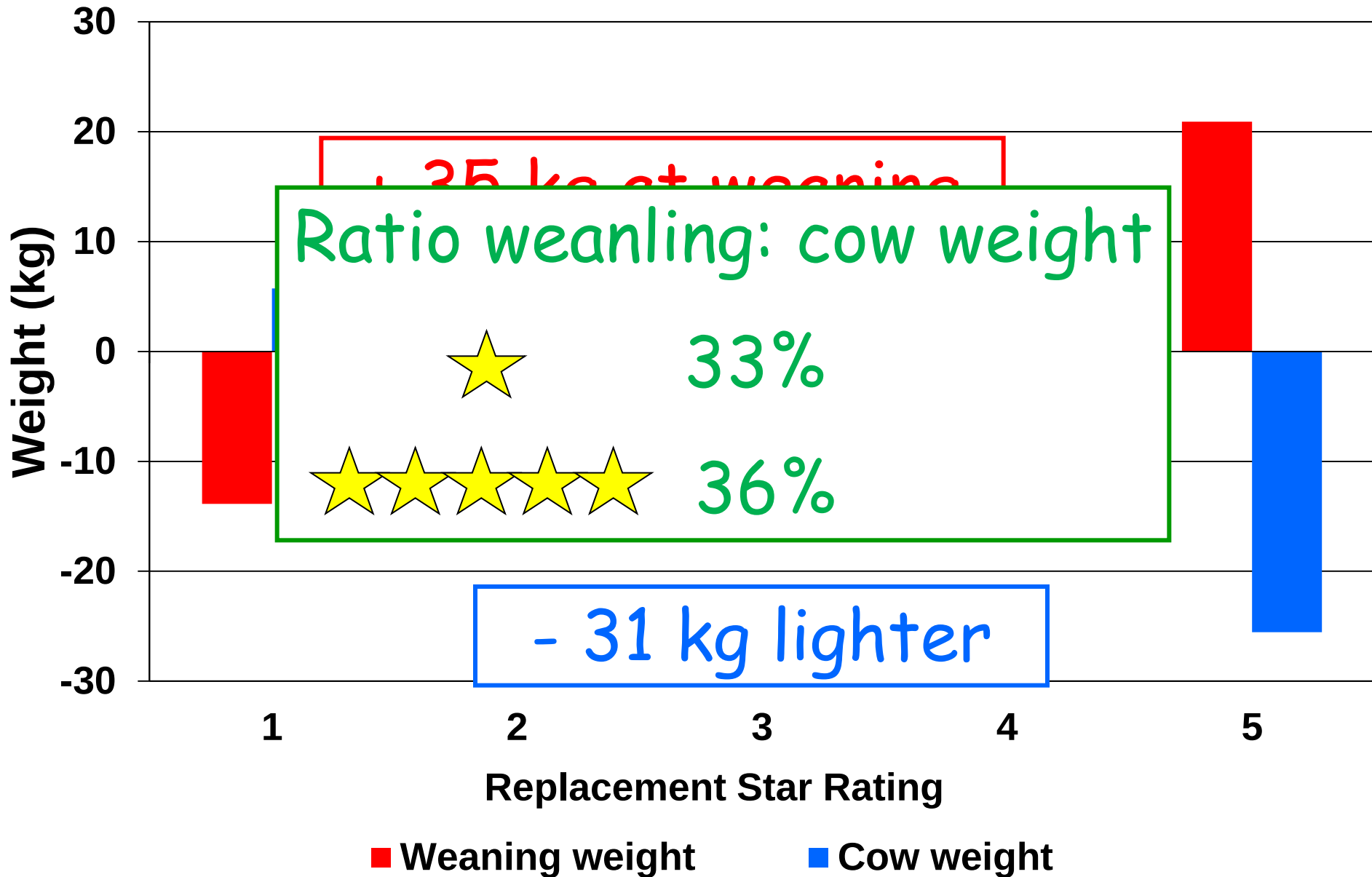
Challenge; Suckler cows are viewed negatively in context GHG.



*Livestock greenhouse gas emissions per species
(Lifecycle Analysis, Gerber et al., 2013)*

- 12% of global GHG emissions are from agriculture
 - Ireland are worst in EU (33% of our GHG is from Ag).
- One solution; cut the Irish cattle herd (-40%).
- Irish Solution; Breed more sustainable animals => BGDG 2015-2020.

Replacement index - Weight



Ireland's BDGP Scheme.

- If suckler cows are viewed as “the problem”, surely they can also be part of the solution!
- Funded as part of EU Rural Development Program. Co-funded with our own DAFM.
 - Agriculture, Climate and Environment Commissions.
- €300m total funding over 6 years.
 - Works out at approximately €90/cow.
 - ~€40m towards cost of genotyping.
 - 1 million animals genotyped in next 2 years.
- ~25k farmers & ~550,000 cows involved.

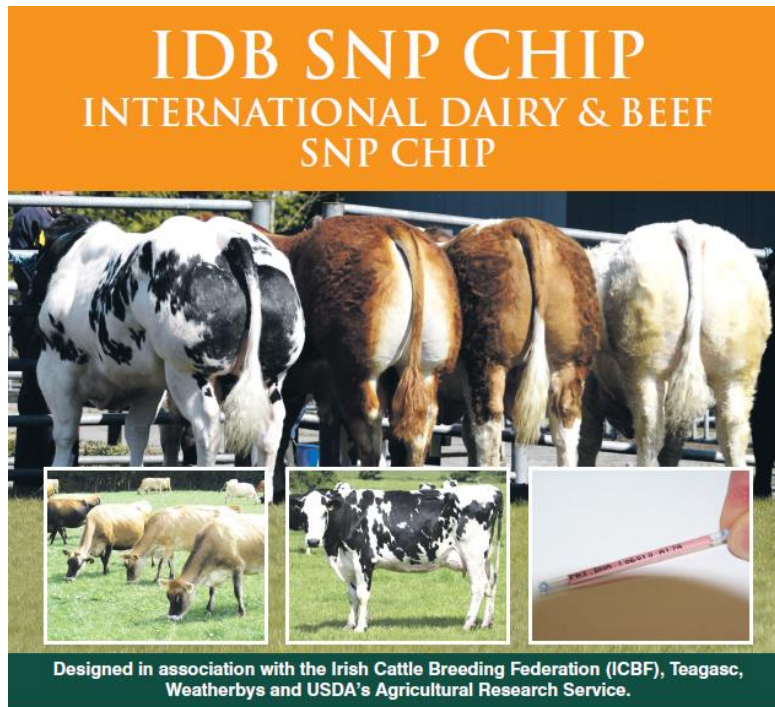
Key Actions re: Scheme.

- Calving. Complete additional calving details at birth, e.g., sire & calving survey.
- Surveys. Collect additional survey data on individual animals (calves, cows, stock bulls).
- Genotyping. Genotype 60% of “reference cows” (number cows calved in 2014) on annual basis.
 - Pedigree animals given priority.

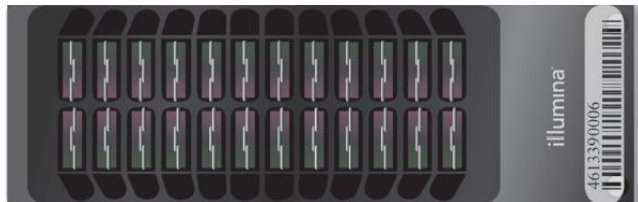
Key Actions re: Scheme.

- Replacement Strategy.
 - Herds MUST have a genotyped 4/5 star breeding bull on farm by 2019, on either the replacement or terminal index. If using AI, 80% of semen used from 2016 must be to genotyped 4/5 star sires (on either index).
 - 50% of female herd MUST be genotyped 4/5 star on replacement index.
 - Animals defined as “eligible” for the scheme based on 4/5 stars, with a genomic evaluation.
- Carbon Navigator. Complete a carbon navigator within first 12 months. Update each year.
- Training. Attend training course in first year.

IDB Chip



- The International Dairy & Beef Chip.
- Currently on v3.
- 54k SNP's.
 - 40k core, 6k for better imputation, 7k for “regions of interest” & 1k for major genes/defects.
- 160 Major genes/defect.
- €22 to farmer incl Tax, sampling tags & all P&P



Genotyped non AI animals

CATEGORY	Animals	Aug-15 official Repl index	Aug-15 genomic Repl index	Aug-15 rel %	Aug-15 genomic rel %
Females NO sire	36,300	€79	€118	19	39
Females WITH sire	26,417	€82	€101	32	45
Males born pre 2014	37,499	€73	€73	34	44
Males born since 2014	2,027	€81	€83	21	36

Opportunities to expand.

- There are 12m suckler cows in the EU.
- Clear opportunities for other EU countries to have same/similar scheme to IRE.
 - Scotland now have a scheme approved and will genotype 50k animals/year over next 3 years.
- Speak with your government contacts.
 - RDP programs can be updated each year. All countries will have a “mid-term” review in 207.
- ICAR/Interbeef can help provide a co-ordinating role.
- Fantastic opportunity to fast forward our beef breeding efforts.