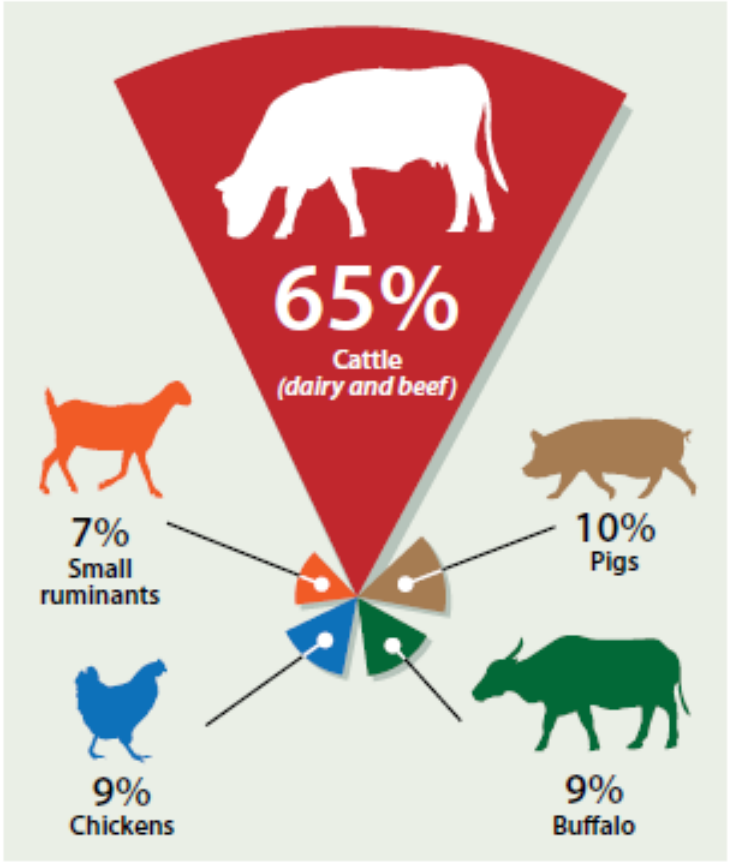
IRISH CATTLE BREEDING FEDERATION

# Beef Genomics and Data Programme

NDP
National Development Plan
Transforming Ireland

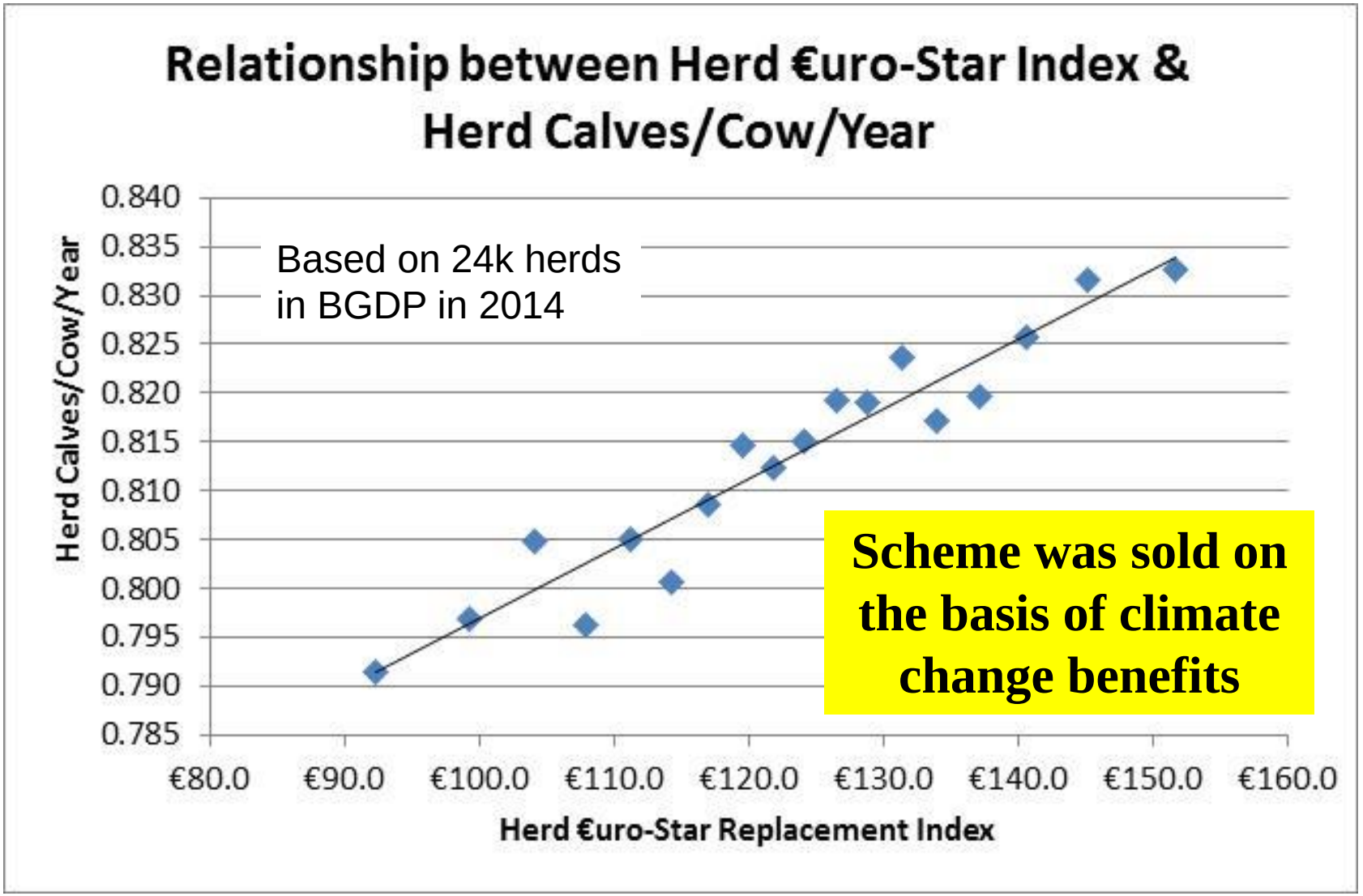
# The Challenge.

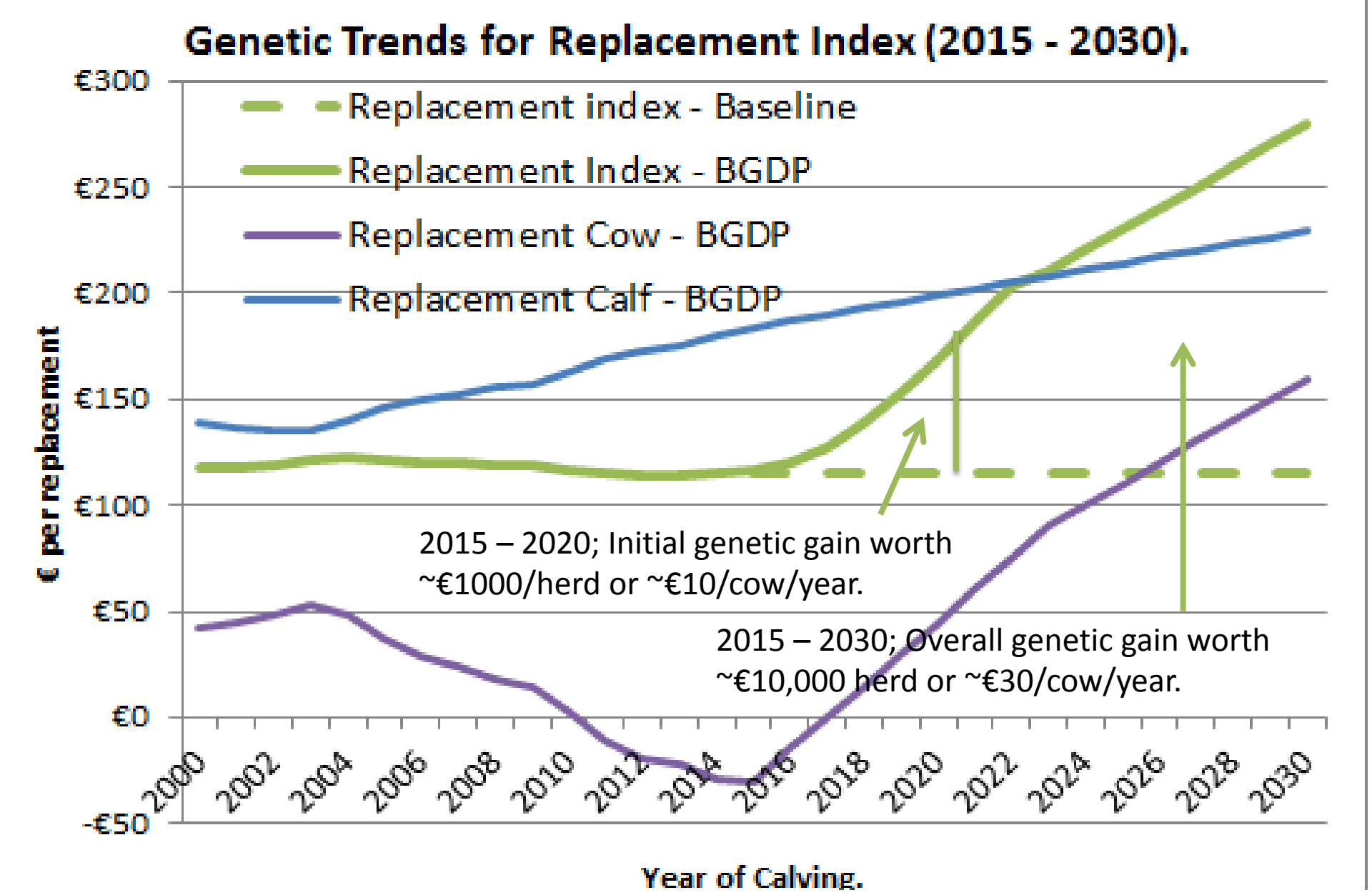



*Livestock greenhouse gas emissions per species (Lifecycle Analysis, Gerber et al., 2013)*

- 12% of global GHG emissions are from agriculture (figure is 33% for Ireland).
  - Cattle are worst offenders.
- Environmental Solution; cut our cattle herd.
- Irish Solution; Breed more sustainable animals => BGDP 2015-2020.

# Increasing Herd €uro-Stars => ***more*** calves/cow/year and ***less*** GHG/LU






Rationale. Past focus on terminal traits (blue), resulting in decline in maternal traits (purple) = no genetic gain in overall replacement index (green). Goal of scheme is to reverse trend in maternal traits, reduce emphasis on terminal traits and increase overall sustainability of Irish suckler herd.

# Requirement 1- Calving Details

Same as Beef Data Programme 2014

- In addition to normal tagging & registration requirements
- Sire & Calving Ease Survey for each calf
- Using any one of the following methods:
  - www.agfood.ie
  - Department approved farm software providers
  - The ICBF Animal Events System – animal events book as provided by the ICBF (to request contact 1850 625 626)

**As per the Suckler Scheme and last years Beef Data Programme**

# Requirement 2 – Surveys

- Same as Beef Data Programme 2014 (calf quality, calf docility, cow milk ability, cow temperament), with some additional information required e.g. calf size and vitality, cow/bull culling reasons.

- Complete survey forms (paper or online) in respect of all cows, calves and stock bulls on his/her holding annually.

- Farmers provided with notebooks for daily field recording (e.g. details of calf size and vigour).

**As per last years Beef Data Programme**

# Requirement 3 – Genotyping

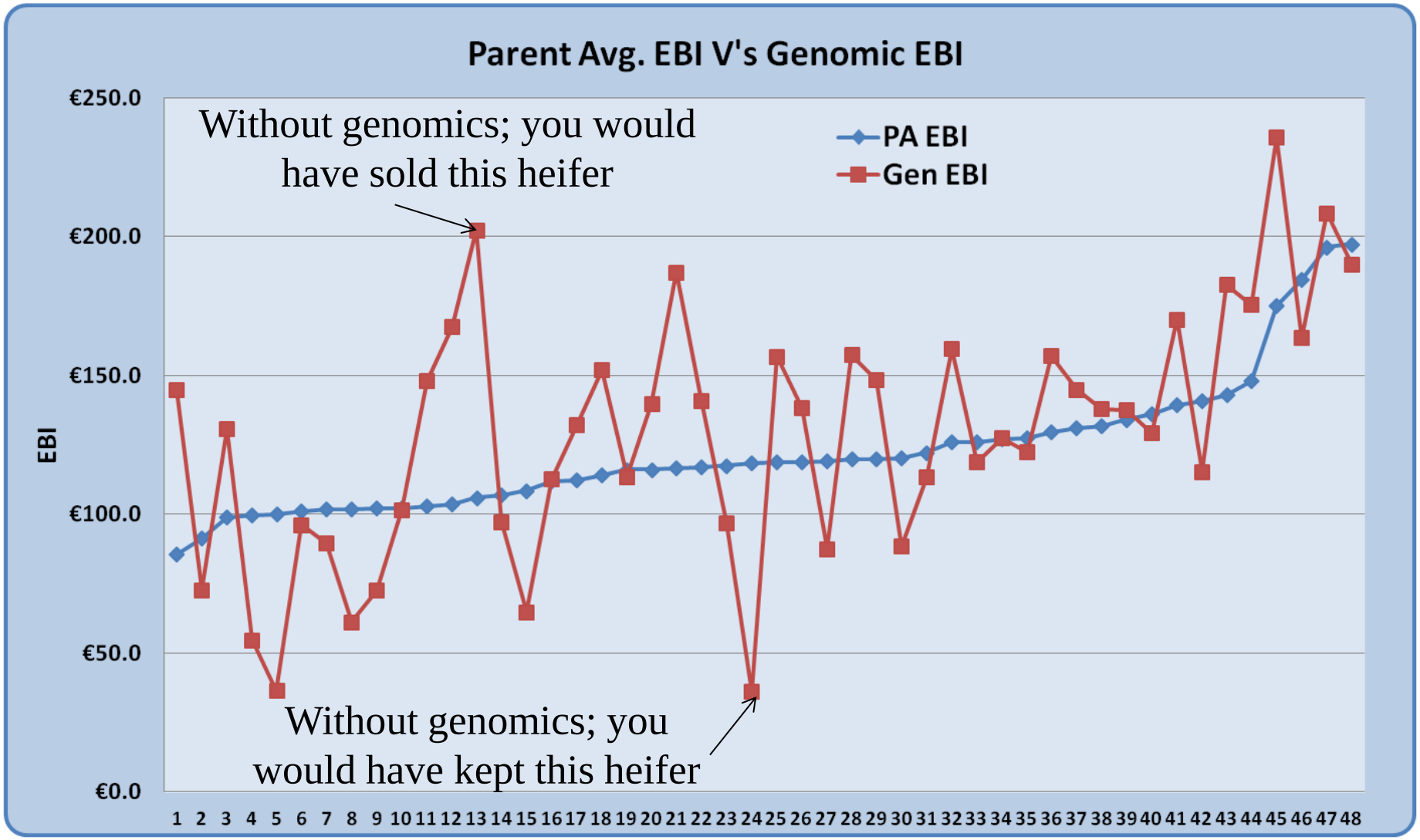
- Same approach as Beef Genomics Scheme 2014; with increased numbers.
- ICBF will select animals to be genotyped in each herd and will notify owners of the animals selected.
- Tissue tags will be supplied to the applicant for this purpose.
- Number = 60% of the number of calved suckler cows on the holding in 2014. **Similar to BGS in 2014 i.e.15% of payment**
  - e.g. farmer with 15 reference animals in 2014 will genotype 9 animals (cows, heifers, calves or stock bulls) each year

**Last year a 20 cow herd would have genotyped 4 animals, under this scheme a 20 cow herd will genotype 12 animals**

# Genotyping 60% animals?

- Need to ***accurately*** identify the more profitable animals for breeding.
  - Farmers buying/retaining 4 & 5 star females & males will expect them to deliver.
- With genomics, accuracy of selection can double (experience from dairying).
- Move to genotyping heifer calves + cows.
  - Scope for farmers to select their own animals for genotyping, provided meet certain minimum requirements.

# Accurately identifying best animals.



# Requirement 4 – Replacement Strategy

## (i) Male replacements

- For applicants **using a stock bull**, at least one stock bull on the holding on 30th June 2019 must have been a genotyped 4 or 5 star bull on either the Terminal or Replacement index
  - ***Where it is replaced*** *in the period to 30th June 2020, it must be replaced by a bull of equivalent genetic merit.*

- **Renting in bulls** – inform DAFM before 30th June 2016 and continue to use 4 or 5 star bulls for duration of Programme.
  - *compliance with animal health and movement legislation*
  - *must have cleared a premovement test for TB and BVD.*

- At least **80% of the AI** used on participating holdings must be from 4 or 5 star bulls on either the Terminal or Replacement index – applies from 30th June 2016

**About 75% of 2014 BGS Herds have a compliant bull – 75% of pedigree registered males in 2014 qualify**

# Why 4 & 5 star sires*?

| | 1 star | 2 star | 3 star | 4 star | 5 star |
|---|---|---|---|---|---|
| Age slaughter | 29.4 | 28.7 | 29.3 | 28.2 | 28.1 |
| Carcass weight (kg) | 323 | 348 | 353 | 358 | 380 |
| Carcass price (€) | €1208 | €1321 | €1395 | €1424 | €1517 |

- **Based on steers slaughtered in 2014 in Slaney Meats from 1, 2, 3 ,4 & 5 star sires.*
- Using 4 & 5 star sires = more profit at slaughter.

# Requirement 4 – Replacement Strategy

**(ii) Female replacements**

Criteria for replacements

- **4 or 5 stars on the replacement index** at the time of purchase (for heifers brought into the herd) or at the time of genotyping (for those replacements bred within the herd).
  - *Provision for purchasing non-genotyped heifers purchased by farmer*.
- At least 16 months old and
- Born in 2013 or later.

Numbers to be achieved

The number of heifers/eligible suckler cows meeting these criteria must

- On 31st October **2018 = 20%** of number of applicant's reference animals
- On 31st October **2020 = 50% of** the number of applicant's reference animals.
  - *e.g. a farmer with 20 calved suckler cows in 2014 must have 10 females meeting these criteria by 31st October 2020*

**About 50% of 2014 BGS Herds would currently meet the 2018 Requirement, about 30% would meet the 2019 requirement. (With a replacement rate of 15%, a herd will be normally replacing 18 of 20 cows in the scheme period.)**

# Latest Results – Grange Maternal*

| | High Replacement Index | Low Replacement Index |
|---|---|---|
| Age at 1st calving (days) | 752 | 769 |
| Gestation Length (days) | 283 | 290 |
| Calving (date) | 16 March | 29 March |
| Cow weight at calving (kg) | 511 | 522 |
| Weaning weight (kg) | 261 | 255 |

- * *Based on female indexes taken from Autumn 2012.*
- 4 & 5 star animals are delivering; more milk, improved fertility & better calves.

# Requirement 5 – Carbon Navigator

**Carbon Navigator** – farm management tool which estimates the potential financial savings and green house gas reductions that could be made on each farm

**(i)** Complete a Carbon Navigator with an approved advisor by 31st October 2016.

- *DAFM covers the cost of the advisor*

**(ii)** On an annual basis submit data a to allow for an update of the carbon navigator.

- *Data will be submitted via survey forms and cover areas such as (1) grazing season length, (2) fertiliser use, and (3) slurry spreading*.

# Requirement 6 – Training

Farmers must attend an **approved BDGP training course before 31st October 2016.**

- Farmer receives €166 for participation
- Cost of training covered by DAFM

Training will include:

- individual requirements of the scheme
- importance of data collection and maternal breeding traits
- understanding and optimal use of breeding indexes
- linkage with carbon efficiency at farm and national level

# BDGP: Payment Model

- Approximately €300 million for circa 35,000 farmers
- Area based payment linked to number of calved cows in 2014 (reference animals)
- Number of calved cows divided by standard stocking rate of 1.5
  - E.g. 30 calved cows in 2014 leads to 20 eligible hectare
- Must claim at least 80% of this area each year
- Payment of €142.50 for first 6.66 hectares – €120 thereafter
  - Plus €166 per farmer for attending training
  - Cost of training and carbon navigator covered separately
- BVD requirement

**Effectively €95 for the first 10 cows, €80/cow thereafter.**

# Summary.

- Scheme is focused on using genomics to breed a more sustainable/profitable cow.
  - Consequences not joining; forego payment (especially when many farmers are already compliant!), inability to sell bulls to scheme herds (pedigree breeders).
  - Benefits of joining; opportunity to change suckler cow type on Irish farms.
- ***Strongly advise all suckler beef farmers to join scheme before 29 May deadline.***