IRISH CATTLE BREEDING FEDERATION

Salers meeting

Stephen Conroy, ICBF

23rd May 2012.

NDP National Development Plan Transforming Ireland

Topics to be discussed

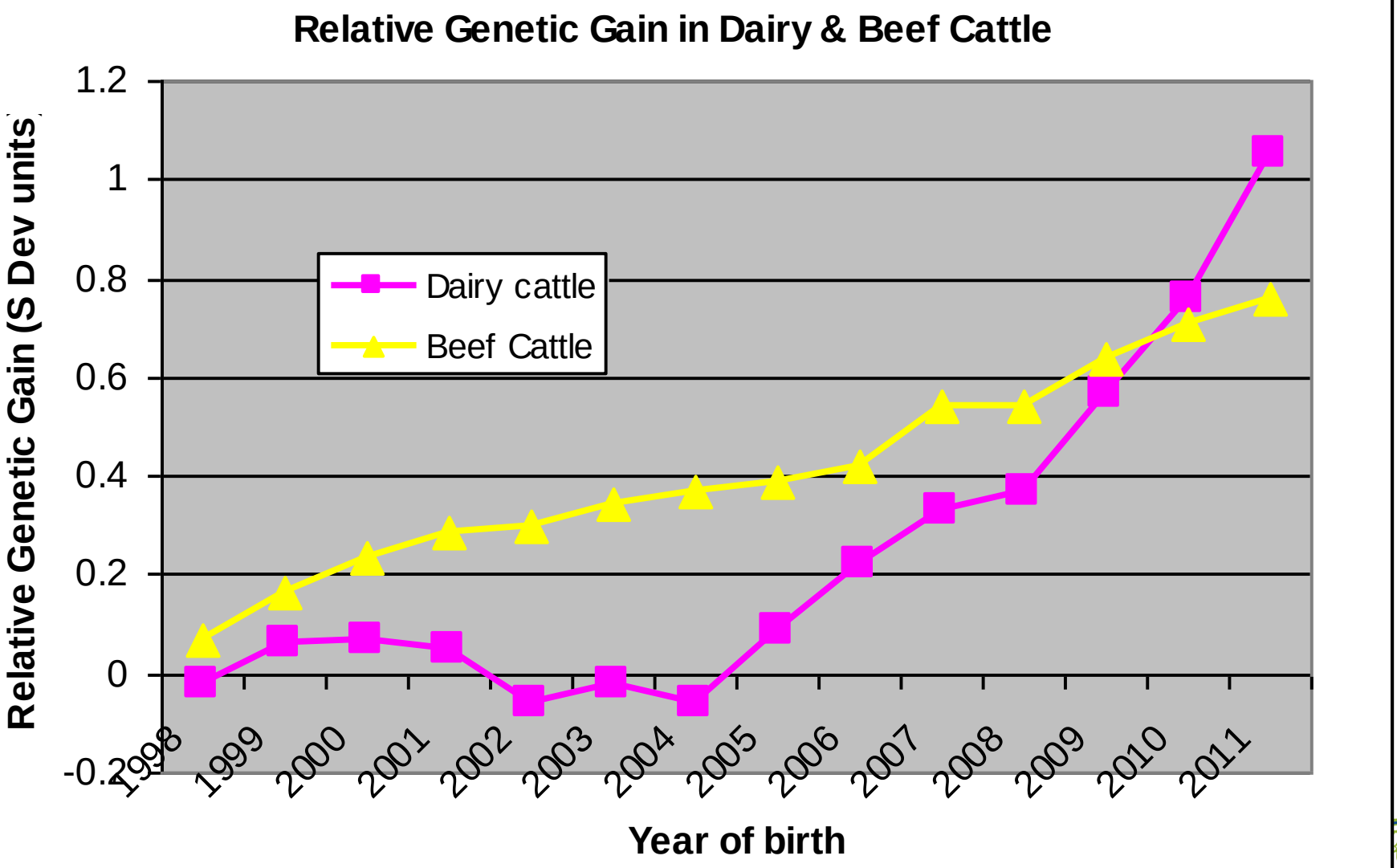
- New G€N€ IR€LAND proposition
- Developments in ICBF Beef €uro-Stars

IRISH CATTLE BREEDING FEDERATION

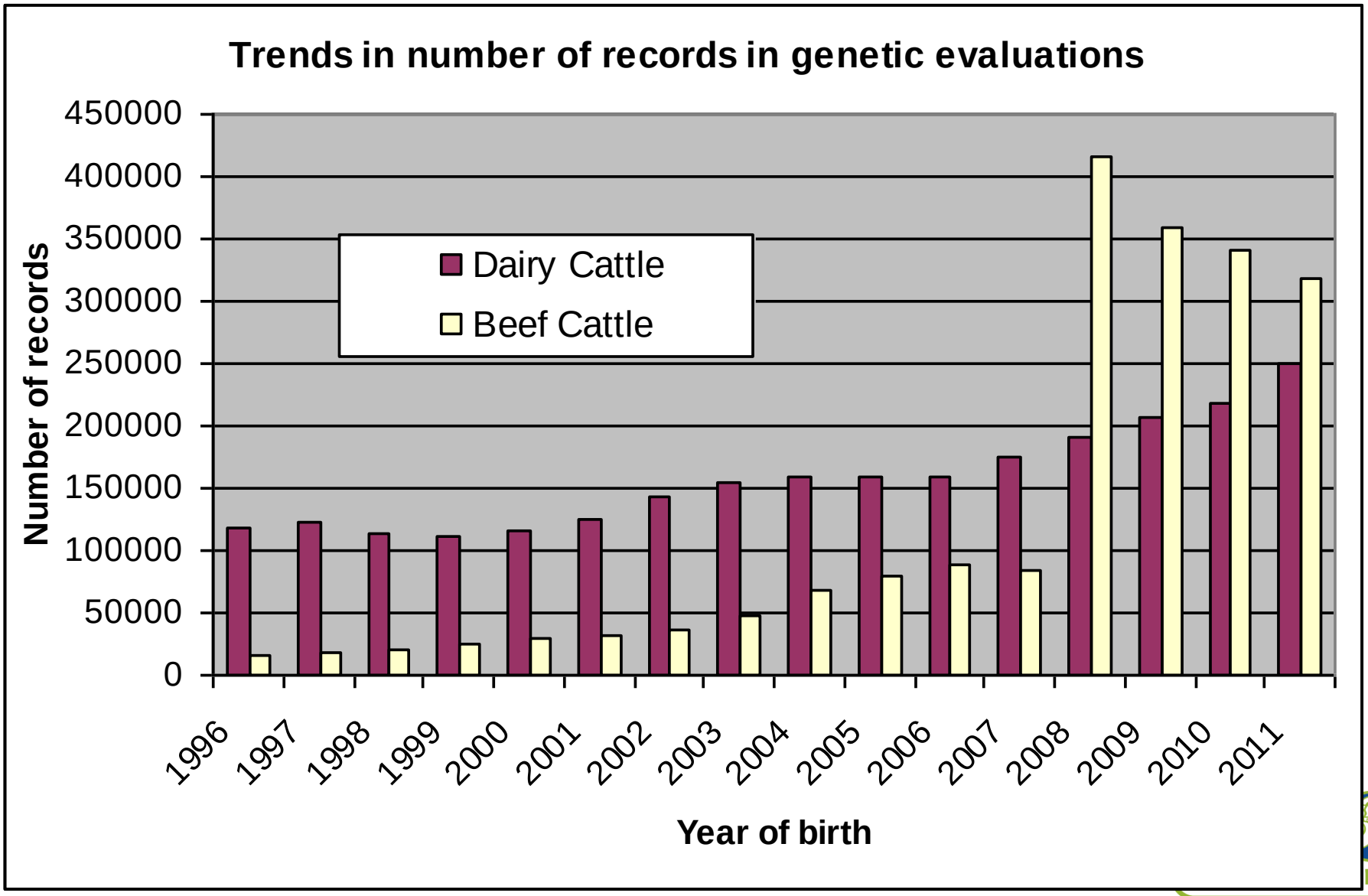
New GENE IRELAND Proposition.

National Development Plan
Transforming Ireland

Genetic Gain in Ireland.

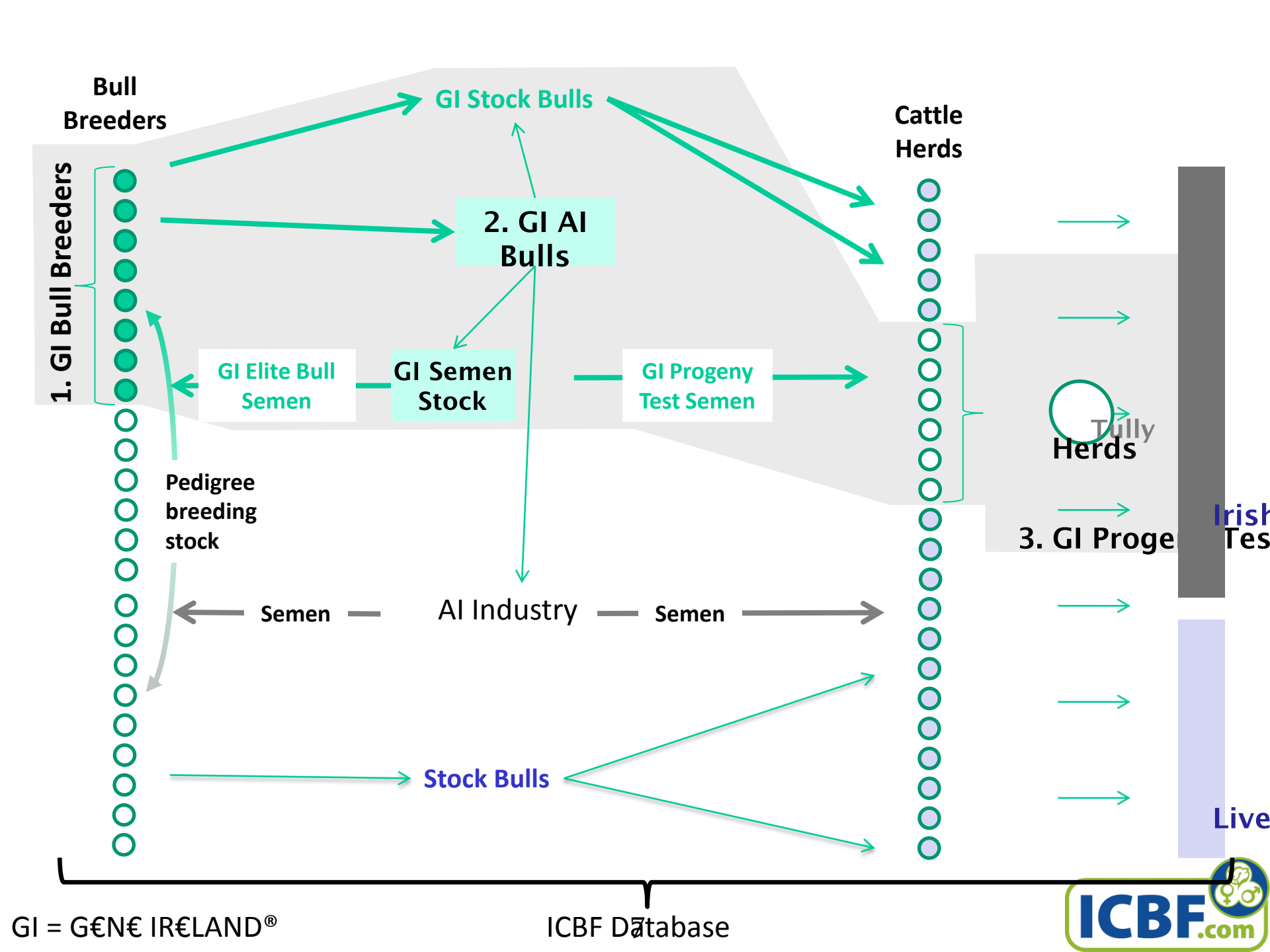


Data quantity & quality.



Background.

- ICBF invests a lot of money into beef breeding programs (€700k/yr), including €300k into Tully.
- Genetic gain in beef is principally through use of stock bulls.
  - Need AI to generate stock bulls.
  - Need AI for breeding maternal female replacements.
- Primary markets for beef AI is; (i) easy calving (dairy) & (ii) weanling export. Not maternal traits.
- Compared to dairy AI, beef AI is a high cost:low value business.
- To increase genetic gain, we must progeny test a lot more bulls. Not commercially viable for AI companies to invest in these bulls.
- Need a “new entity” to purchase these bulls.


Bull Breeders
GI Stock Bulls
Cattle Herds
1. GI Bull Breeders
2. GI AI Bulls
GI Elite Bull Semen
GI Semen Stock
GI Progeny Test Semen
Tully
Herds
Pedigree breeding stock
3. GI Proge
Tes
Irish
Semen
AI Industry
Semen
Stock Bulls
Live
GI = G€N€ IR€LAND®
ICBF Database
ICBF.com

1. Bull breeder herds.

Issue	Key considerations
G€N€ IR€LAND Bull Breeder Herds	• G€N€ IR€LAND (GI) prepares terms and conditions for GI Bull Breeder herd participation. • GI recruits bull breeding herds. Voluntary program for bull breeders. Approximate basis for progeny test (100 candidate bulls = 1 progeny test bull). • GI provides range of services to bull breeding herds, with main focus on; (i) mating of elite cows to produce bulls required for GI breeding program, (ii) provision of stock bulls for wider cattle industry, and (iii) access to stored semen from GI AI bulls (see below). Members pay an annual fee for this service (€250/year). • GI provides guidance on best practice regarding provision of stock bulls and AI bulls (data collection, genetics, health & rearing protocols). • GI assesses information quality and provides feedback to bull breeding herds. GI determine if bull breeding herd has complied with best practice guidelines, scores herd annually and provides a GI "stamp" for herd.

2. GI AI Bulls.

G€N€ IR€LAND AI bull	• GI decides which bulls achieve this status based on: (i) Genetic merit for "New" maternal index, (ii) relatedness to Irish herd, and (iii) disease status (must be that required for entry to AI) • GI makes payment to bull owner & GI becomes owner of the bull (an average of €5k/bull – but will vary depending on breed) • Bull enters semen production and 1000 doses of semen collected per bull, with 500 straws being dispatched to progeny test herds and 500 straws being added to GI semen stock for potential elite mating's. • Bull is sold by GI to partner AI companies (first option) or failing that to commercial herd-owners. Bull is only in GI AI for a short period (~14 mths – ~18 mths). • GI bull breeding herds have access to semen from GI AI bull (500 straws/bull) for elite matings, to generate next generation of young bulls for program.

3. GI Progeny Test Herds.

G€N€ IR€LAND Progeny Test Herds	• GI prepares and maintains catalogue of GI AI bulls to be progeny tested. • GI prepares and maintains progeny test herd participation rules. • GI recruits herds to use progeny test semen and herd owner signs participation agreement. • GI distributes semen to participating herds through AI field service providers. • GI monitor's progeny test herds and ensures recording is conducted according to best practise guidelines. • GI purchases a defined number of progeny/sire (at approximately 1 year of age) for central progeny testing (at Tully). These animals would be evaluated for; (i) feed intake/efficiency, (ii) carcass/meat eating quality and (iii) health/disease traits.

Ownership, Funding & Direction.

- Program would be “owned” by ICBF.
- Funded from ICBF’s annual budget.
- Technical direction provided by stakeholder group.
  - Breed specific for larger breeds.
  - Bulls selected on New Maternals, diversity & functionality.
- Reporting to ICBF board.
- Scaleable budget, with small net surplus (after v costs contingency).

Cash flows – 20 bull model

Income	2013	2014	2015	2016	2017	2018
Bull Breeder - Gene Ire fee	€100,000	€100,000	€100,000	€100,000	€100,000	€100,000
Farmer - HerdPlus contribution	€85,000	€85,000	€85,000	€85,000	€85,000	€85,000
Sale of surplus bulls	€42,000	€42,000	€42,000	€42,000	€42,000	€42,000
Sale of bulls to AI	€48,000	€48,000	€48,000	€48,000	€48,000	€48,000
Sale - progeny test cattle	€0	€0	€280,000	€280,000	€280,000	€280,000
ICBF annual contribution	€300,000	€300,000	€300,000	€300,000	€300,000	€300,000
Total income	**€575,000**	**€575,000**	**€855,000**	**€855,000**	**€855,000**	**€855,000**
Variable costs	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
Bull selection	€4,000	€4,000	€4,000	€4,000	€4,000	€4,000
Bull acquisition	€100,000	€100,000	€100,000	€100,000	€100,000	€100,000
Bull insurance	€7,000	€7,000	€7,000	€7,000	€7,000	€7,000
Semen collection	€60,000	€60,000	€60,000	€60,000	€60,000	€60,000
Semen assembly (PTEST bulls).	€3,600	€3,600	€3,600	€3,600	€3,600	€3,600
Semen storage (Surplus semen)	€12,500	€12,500	€12,500	€12,500	€12,500	€12,500
DNA Collection & Storage	€0	€4,500	€4,500	€4,500	€4,500	€4,500
GROW - Weanlings	€0	€18,000	€18,000	€18,000	€18,000	€18,000
Purchase - progeny test cattle	€0	€0	€200,000	€200,000	€200,000	€200,000
Cost of finishing progeny test cattle	€0	€0	€72,000	€72,000	€72,000	€72,000
GROW - Maternal replacements	€0	€0	€0	€0	€16,800	€16,800
ICBF Fixed Costs	€300,000	€300,000	€300,000	€300,000	€300,000	€300,000
Contingency (10% of Variable Costs=€50k/year)	€50,000	€50,000	€50,000	€50,000	€50,000	€50,000
Total costs	**€537,100**	**€559,600**	**€831,600**	**€831,600**	**€848,400**	**€848,400**
Balance	**€37,900**	**€15,400**	**€23,400**	**€23,400**	**€6,600**	**€6,600**

Other considerations.

- Bulls owned directly by AI
- Cost of purchasing cattle for the central progeny test.
- Purchase and ownership of bulls.
  - No commercial transactions.
  - Bulls in ownership for short period.
  - Semen collection & processing by AI partners.
  - Open to all AI partners.
- Cost of purchasing bulls.

Summary

- Strong, simple & low cost program.
  - More effective use of ICBF funding (€300k/yr).
  - Scale-able, with no impact on ICBF budget.
  - Builds on G€N€ IR€, SCWS & New Maternals.
- Potential to test 20..40…80 bulls/year.
- A breeding program. NOT a commercial business.
- Brings together all elements of beef breeding industry (AI, breeders, herdbooks, farmers, ICBF…..).
- *Worth ~€100m to Irish beef industry over 10 yrs.*

IRISH CATTLE BREEDING FEDERATION

Developments in ICBF Beef €uro-Stars.

National Development Plan
Transforming Ireland

Overview.

- Background.
- Approach taken.
- New indexes.
- Implementation.

Background.

- €uro-Stars introduced in 2007.
- Strong uptake, especially terminal traits.
  - 719k beef bull searches on ICBF website.
- Concern re: maternal traits.
  - Suckler Beef Value (SBV) was too heavily weighted on terminal traits.
  - No “obvious” index for breeding/selecting for maternal attributes (bulls and/or heifers).
  - Maternal performance has been declining.

Decline in Female Fertility Traits.

	2007	2008	2009	2010	2011
Calving Interval (Days)	398	396	397	404	405
Calves/cow/ year	0.87	0.87	0.85	0.84	0.85
Age at 1st calving (months)	30	31	31	31	32

€uro-Star stakeholder group.

- Request for original €uro-Star group to be reformed.

- Terms Reference: *To advise on the further development of information services (€uro-Stars) provided by ICBF to support the breeding or more profitable beef cattle in Ireland*".

Approach taken.

- Team of 14 people; stakeholders (7) and technical support (7).
- Series of six “team” meetings over 4 months.
- Additional meetings with industry, including invited submissions.
- Process: Economic values -> impact on indexes -> index selection -> recommendations.

What's needed.

- Submissions invited from stakeholders.
- Excellent feedback and pointers.
- Discussed at industry and herdbook technical meetings.

Submissions – Key feedback.

- Focus on maternal & cost of production traits.
- Maternal and terminal indexes, only some support for an overall index.
- Request for a dairy beef index.

Indexes – Key outcomes

i. Terminal – replace weanling export and carcass

ii. Dairy beef – Which traits

iii. Maternal – cow traits and calf quality

iv. Overall –no need an overall

Terminal Index

- To introduce a new **Terminal** index, for the identification of sires suitable for breeding high profit animals (males and females) for slaughter.

- Combines weaning and slaughter index along with calving traits.

- It would be published in the units of €/progeny.

Terminal Index cont'd.

- Cost of calving (CD%, gestation length & mortality) should be included.
- Correlations between New terminal & weanling export & carcass are high (~0.70).

	Weanling export	Carcass	New Terminal
Weanling export	1.00		
Carcass	0.88	1.00	
New Terminal	0.61	0.83	1.00

Dairy beef index

- To introduce a new **Dairy** beef index, for the identification of sires suitable for use on dairy cows.

- The index would be published in units of €/progeny.

- Takes into account:
  - Mortality, gestation lenght, calf price
  - More work on traits and economic values.

Maternal index

- To introduce a new **Maternal** index, for the identification of animals (sires and/or suckler female replacements), suitable for breeding and selecting high profit replacement females.
- The index would replace the current milk and fertility sub-index.
- It would be published in the units of €/progeny.

Maternal Index cont'd.

- Range of potential maternal indexes considered; SBV, maternal replacement, pure maternal….
- Maternal replacement index selected.
  - Includes pure maternal, calving & terminal. More balanced.
  - Covers requirement of replacement heifer selection.

Overall index.

- No need for a new overall index.
  - cease publishing the Suckler Beef Value

- Maternal replacement index is the "overall" index for effecting genetic gain in pedigree and commercial suckler herd.
  - Improve maternal & terminal in pedigree cows -> improvement in commercial cows. Key link to G€N€ IR€LAND beef breeding program.

New Indexes – Relative weightings

	Suckler Beef Value	New Maternal Index	New Terminal Index
Calving	19%	22%	32%
Terminal	60%	36%	68%
Maternal	21%	42%	
Total	100%	100%	100%

Presentation, publication & roll-out.

- Implementation group is established to oversee the presentation, publication and roll-out of these new indexes.
  - Current stakeholder group, but with additional assistance/feedback from relevant industry groupings.

Summary.

- Rigorous, transparent process followed.
- Group very positive about outcomes.
  - Increased focus on maternal and cost of production traits.
  - Continued improvement in terminal traits.

Implementation.

- In line with industry feedback, ICBF board adopted the recommendations as outlined by the €uro-Star review group.

- Proceed to next phase of project: implementation and roll-out for next Autumn breeding season.