IRISH CATTLE BREEDING FEDERATION

Are the UK Beef Breeding Structures Fit for Purpose?

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Irish Cattle Breeding Federation (ICBF).

British Cattle Breeders Club Conference.

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NDP National Development Plan Transforming Ireland

Key questions?

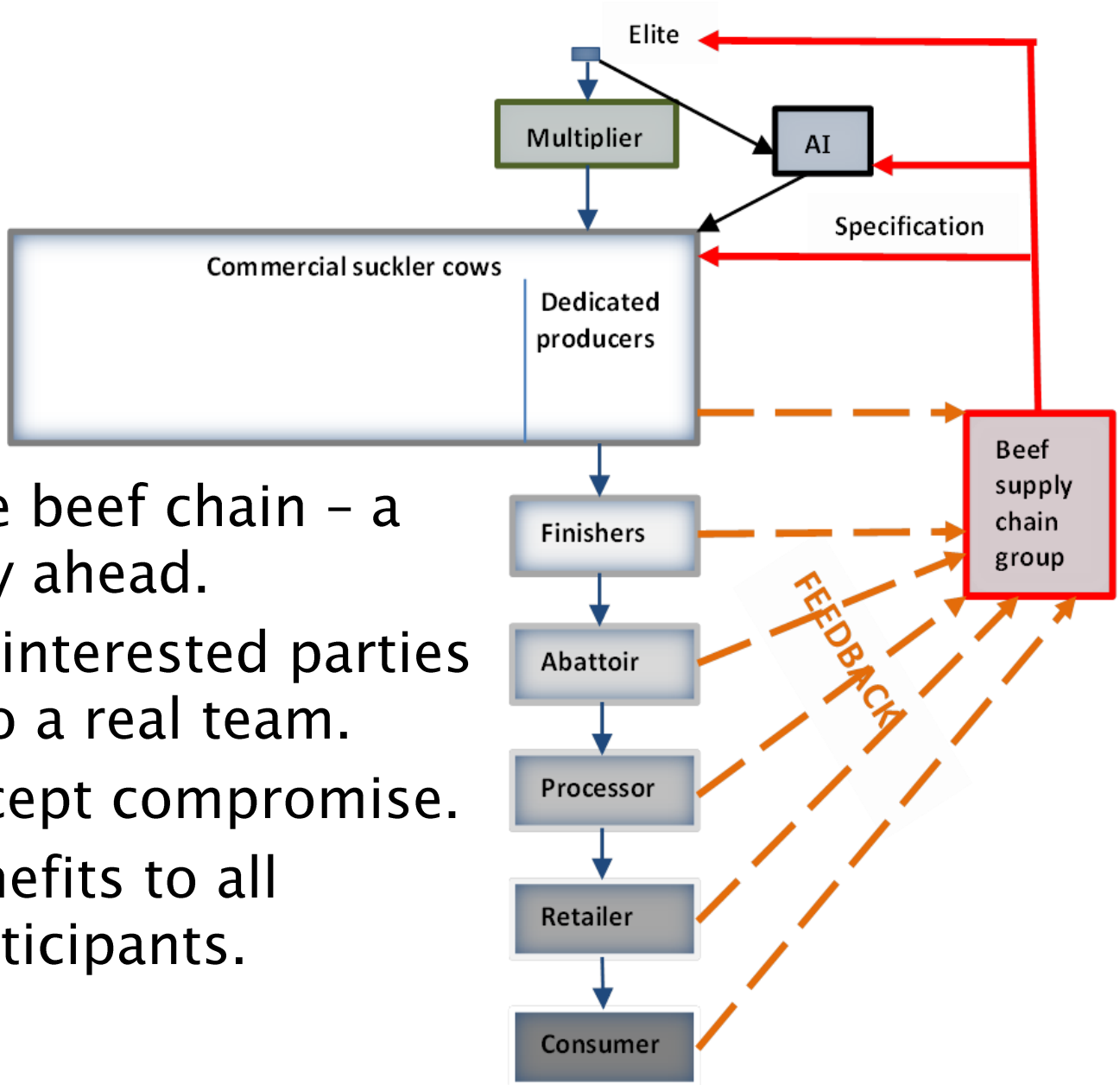
- What are the structures required to deliver a joined up, integrated industry identifying and delivering exceptional added value and efficiencies at every level?
- How can we best exploit existing and new technologies?
- What can we learn from Ireland and elsewhere?

Beef genetics – a promise unfilled (Bichard 2012).

- Beef is way behind poultry, pigs and dairy cattle. Limited by biological, managerial & structural issues.
- Situation can be addressed if;
  - Breeders unite for future of their breeds.
  - Processors facilitate collection of carcass data.
  - Geneticists are an integral part of chain.
  - Processors & retailers work with other stakeholders to set goals and provide incentives.
- Need to establish a single “beef chain”.

A future beef breeding structure?

- The beef chain – a way ahead.
- All interested parties into a real team.
- Accept compromise.
- Benefits to all participants.



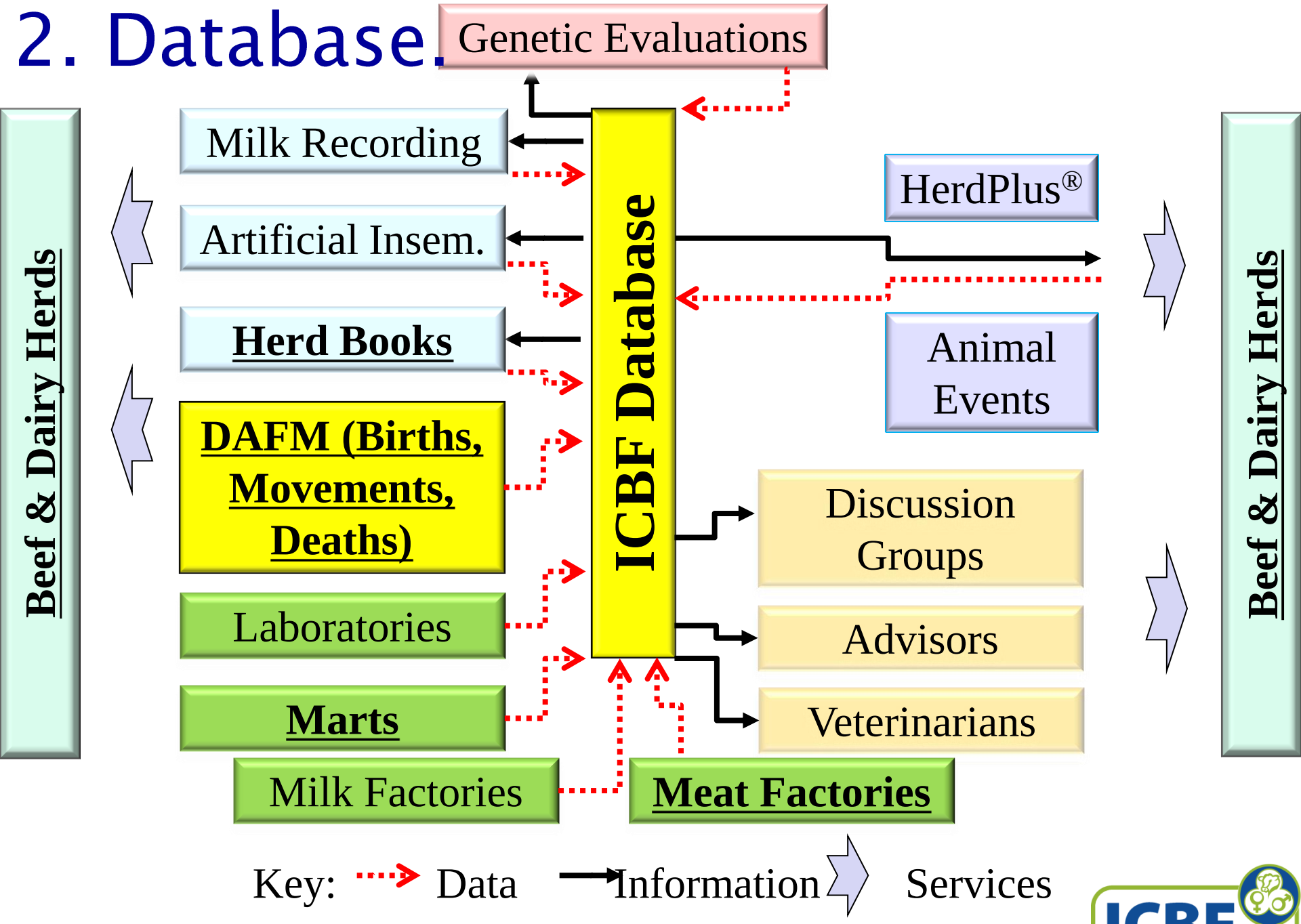
A single beef chain. Is this realistic?

- Examples within industries, but few at a National level.
  - Dovecote park & Waitrose.
  - Woodhead & Morrisons (Shorthorn breed).
  - ABP, SAC & UK Lim.
- Ireland (ICBF) is probably the best example.
  - Four key elements; structure, database, indexes & breeding programs.

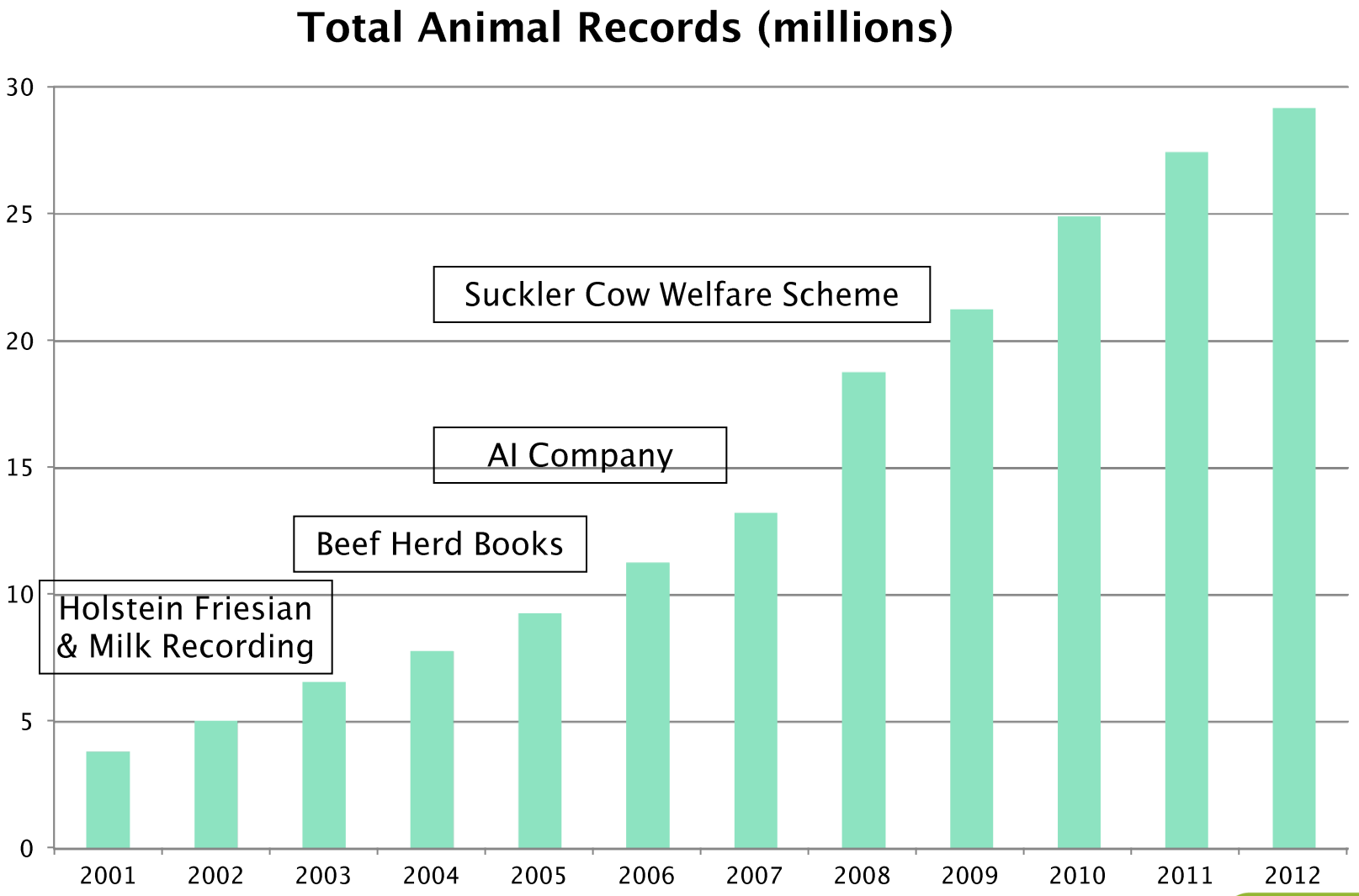
1. Structure; Irish Cattle Breeding Federation (ICBF).

- Established in 2000.
- Genetic Gain (€) for Irish dairy and beef farmers and industry.
- Shareholders; Farm Orgs (46%), herdbooks (18%), milk recording (18%) & AI (18%). £2 million initial share capital.
  - 5-6 key "visionary" people.
- Annual budget of ~€5m. Balance between "industry good" & service income.
- Single central database for breeding.

2. Database.


Genetic Evaluations
Beef & Dairy Herds
Milk Recording
Artificial Insem.
Herd Books
DAFM (Births, Movements, Deaths)
Laboratories
Marts
Milk Factories
ICBF Database
HerdPlus®
Animal Events
Discussion Groups
Advisors
Veterinarians
Meat Factories
Beef & Dairy Herds
Key: Data Information Services

Increases in data recording.



3. Genetic Indexes.

- Only 35k pedigree cows, yet evaluations based on ~20m+ "commercial" beef animals.
- Evaluations operate across breed.
- €uro-Star Indexes; Terminal, Maternal & Dairy Beef.
- Big shift in focus towards "costs of production".

Table 1. ***MATERNAL*** index.

Index	% emph
Calving	15%
Docility	4%
Feed Intake	24%
Carcaas Beef	26%
Maternal Milk	13%
Female fertility	18%

Table 2. ***TERMINAL*** index.

Index	% emph
Calving	29%
Docility	2%
Feed Intake	18%
Carcass Beef	50%

4. Breeding Program – New G€N€ IR€LAND

- Genetic gain in beef 20% of equivalent gain in dairy (€5/year compared to €25/year).
  - Lower number of bulls progeny tested.
  - Lower accuracy of proofs (maternal traits).
- Addressing is major priority of new program.
  - Bull breeding herds (voluntary, Herd Data Quality Index, bull breeder stamp, AI & stock bulls)
  - Bulls for breeding program (1000 straws).
  - Commercial progeny test (Tully).
- Exploiting within breed variation – all breeds.

G€N€ IR€LAND – Commercial progeny test.

	Final live-weight (kg)	Average daily gain (kg)	Dry matter intake (kg/day)	Feed conv efficiency (dmi/adg)
Highest	826	2.6	13.4	7.4
Lowest	558	1.2	8.6	4.4
Average	672	1.9	11.2	5.8

- First 77 commercial progeny just slaughtered. Progeny of 20 AI sires (including PTest sires).
- Significant differences in feed intake/efficiency.
- High quality phenotypes collected; feed intake, meat quality, health & disease.

The Beef Chain; A Practical Example.

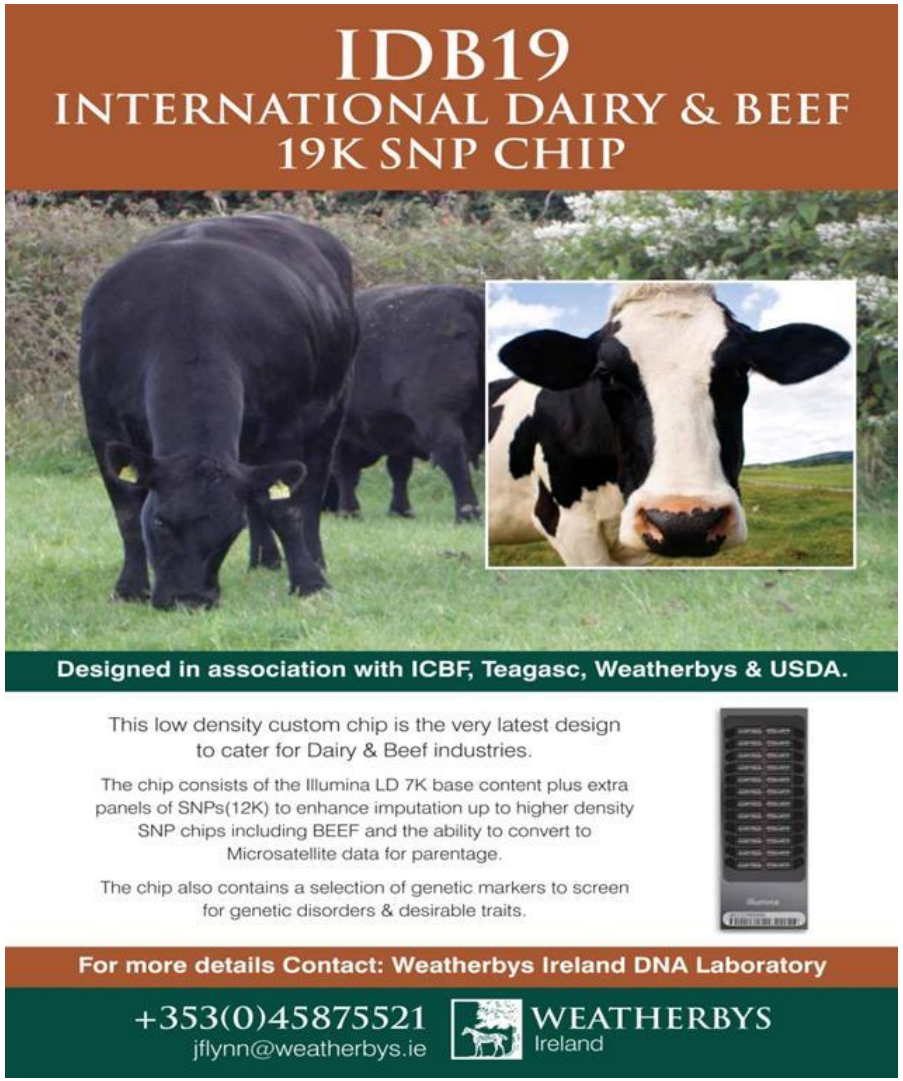
- Single large finishing unit in Ireland.
- 5,495 heifers slaughtered during 09-12.
- Born in 2,992 suckler herds.
  - 71% Stock bull progeny, 19% AI bred progeny, ***only 10% with no sire recorded.***
- 2,190 sold as weanlings (weight & price).
- 3,962 sold as stores (weight & price)
- All with carcass data (weight, price & cuts).
- All with €uro-Star index data.

The Beef Chain – Example.

€uro Stars	€uro Index	Weanling Wt kg	Weanling Value €	Store Wt kg	Store Value €	Finisher Age	Finisher CWt kg	Finisher Value €	Processor HVC kg	Processor VHVC kg	Processor Value €	Retailer Value €
5 Stars	€87	377	€727	433	€811	565	323	€1,204	55.8	25.4	€1,313	€1,820
4 stars	€63	358	€691	424	€790	571	311	€1,150	53.6	24.7	€1,260	€1,747
3 stars	€50	357	€676	419	€768	573	305	€1,111	52.1	24.0	€1,229	€1,703
2 stars	€36	350	€652	418	€756	578	297	€1,078	49.6	23.1	€1,177	€1,632
1 star	€10	346	€645	412	€745	581	288	€1,038	47.4	22.2	€1,124	€1,559
Diff	**€154**		**€82**		**€66**			**€166**			**€188**	**€261**

- For chain to work, everyone must extract some value.
  - Average value is increasing – but so is differential.
- Indexes work, but are the processor & retailer giving enough "price signals" re: carcass cut data?
- "Structural" weakness in ICBF model.

New initiatives.



- Become easier when structure is correct.
- Genomics for parentage verification, research and genetic evaluation. Implementing now.
- Sexed semen field research project; 100 herds, 8000 females, fresh, frozen, cows, heifers (+ synchrony).

Summary – What are the key "infra-structural" elements?

1. A "National" organisation.
   - Farmers, breeders, herdbooks, AI, processors, retailers & supportive govt.
2. Central database.
   - Linked to all shareholders & stakeholders.
3. Accurate genetic Indexes.
   - Data from commercial suckler cows.
4. Breeding program.
   - Elite animals & key phenotypes.

Final Thoughts.

- Organisational structure is key.
  - This is down to the people that want and can make it happen.
  - Must be “driven” by commercial farmers & breeders.
  - Pull” from processors & retailers.
  - Must think “across breeds”. Over-focusing on breeds (processors/retailers) can be divisive.
  - Supportive government framework.
- Solve structure – and all other issues become much easier!

Thank You.

- Bichard 2012 has provided the "theoretical" framework.
- Hopefully I have provided you with a solid "practical" example, which supports the theory.
  - Accepting fully in Ireland that we are still learning and evolving!
- Thank you.