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COSTS AND EFFECTIVENESS OF VARIOUS NATIONAL CATTLE BREEDING STRUCTURES

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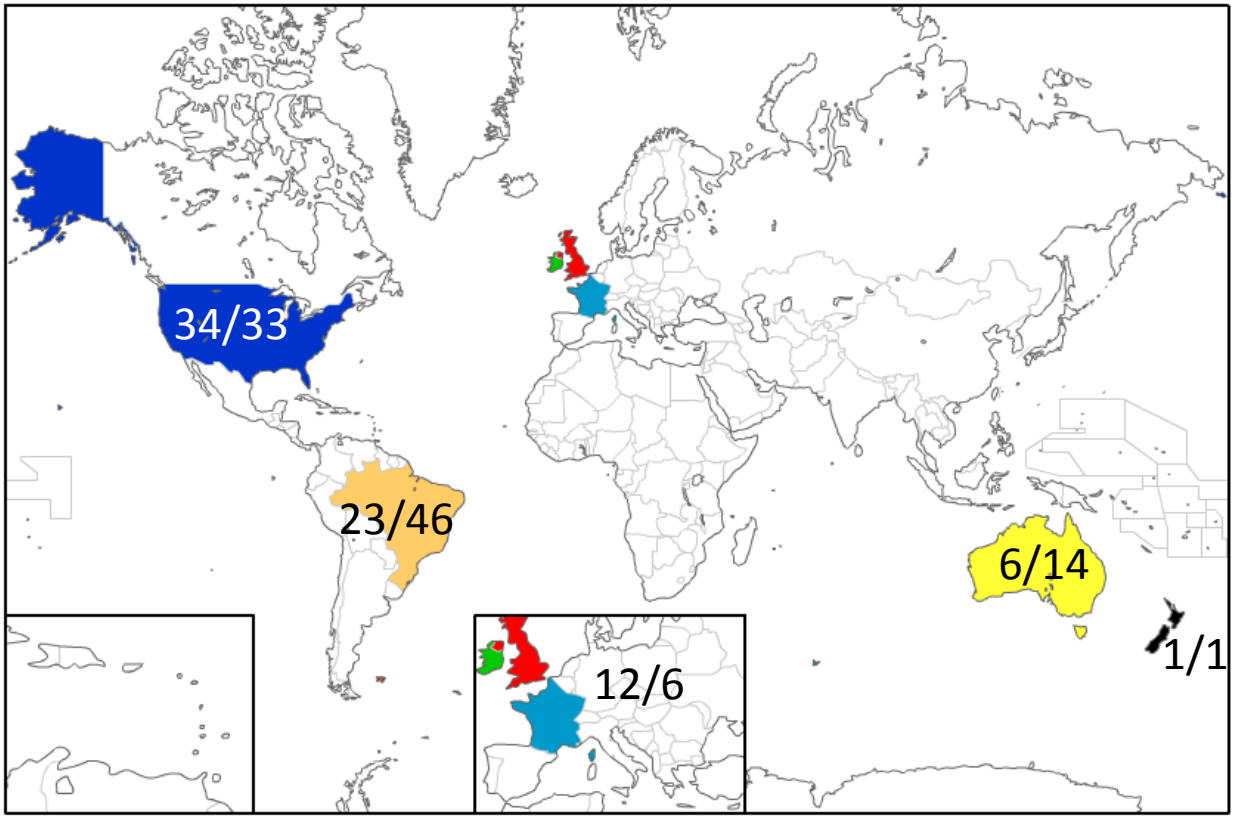
How much should we be investing in cattle breeding structures.....?

7 Countries - Beef Focus

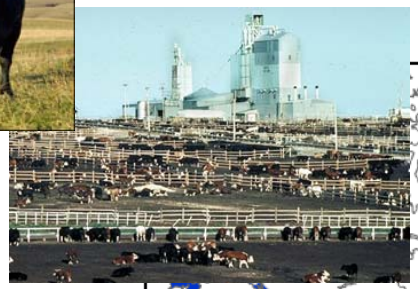
1

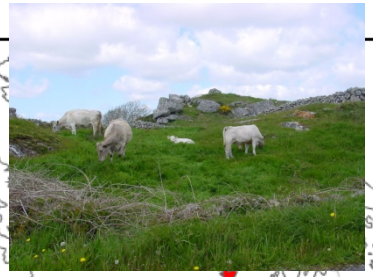
USA
Brazil
Australia
France
UK
Ireland
NZ



Beef Industry Value Billion Euros / Beef Cows Million

7 Countries





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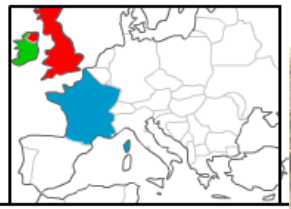

Genetic trends

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- US substantial increases in growth rate, minimal deterioration in birth wt & calving ease
- France, UK, Ireland focus on conformation, but compromise to calving and maternal traits
- Little progress in cattle run in extensive environments – (Indicus component)
- Brazil more focused on maternal traits
- Australia and NZ making gains in growth rate but at expense of birth weight and mature size

Genetic trends

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- **USA** substantial increases in growth rate with minimal deterioration in birth wt & calving ease
- **France**, UK, Ireland focus on conformation, but compromise to calving and maternal traits
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Recording rates

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Country	Recorded breeding females (000's)	% of all cows
USA	750	2.3
Brazil	~800	1.7
Australia	140	1.0
France	530	12.9
UK	57	4.1
Ireland	36	3.6
New Zealand	66	6.0

Investment in genetics

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Country	Total (€ M)	% Industry value	€ per recorded female	€ per breeding cow
USA	15.2	0.04	20.3	0.46
Brazil	1.0	0.004	0.4	0.02
Australia	3.6	0.06	25.6	0.27
France	14.5	0.21	27.4	3.54
UK	1.8	0.08	32.4	1.32
Ireland	1.9	0.11	53.2	1.92
New Zealand	0.4	0.05	6.5	0.39

Who invests?

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Country	National tax (%)	Farmer levy (%)	Breeder services (%)
USA	25	0	75
Brazil	0	0	100
Australia	45	11	44
France	5	26	69
UK	0	5	95
Ireland	45	21	34
New Zealand	0	0	100

Who benefits?

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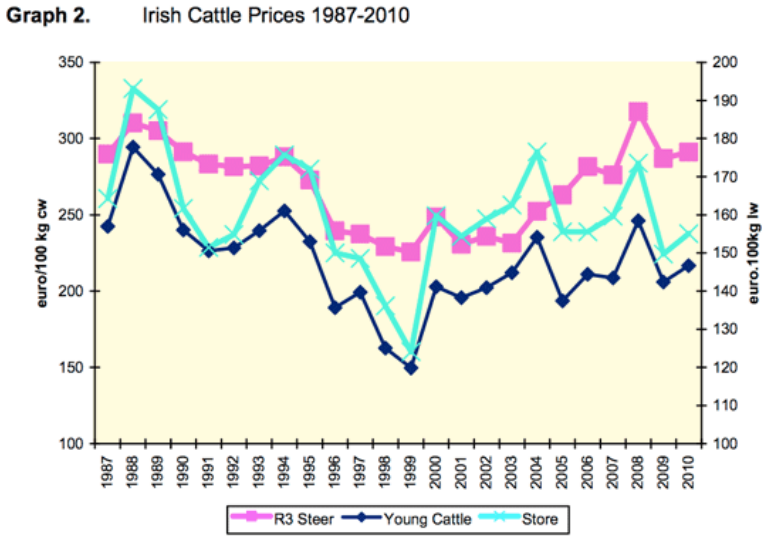
- NOT
  - Meat processors
  - Feedlots/finishers



- NOT
  - Breeders
  - Static margin over slaughter value for recording and marketing effort
  - Breeders are motivated by competition for market share

Who benefits?

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Small country with substantial trade

- Lower cost of production does not influence price
- Improved quality improves price
- More profits (typically spread across the cow-calf sector) = higher (relatively) land values
- Pastoral land owners benefit in the long run

Who benefits?

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Large country with less trade

- Lower cost of production means lower price
- Static demand (relatively insensitive to price)
  - Consumers benefit
- Some benefits to commercial farmers if increased competiveness with competing domestic proteins

Who benefits?

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Sector	Benefit
Breeder	No
Cow – calf	Yes (small exporting country)
Finisher Feedlot	No
Processor	No
Consumer	Yes (unless national price set by trade)

Investment Imbalance!

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Investment imbalance

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- Performance recording breeders make most of the investment in genetic improvement (71% + on farm)
  - Pig and Poultry companies even more extreme
  - More investment in dairy national evaluation centres than for beef
- There may be an under investment in beef cattle genetic improvement by **commercial farmers** and **consumers**
- Estimates of **benefits are very high**, but rates of **genetic progress** being achieved are commonly **well below potential**

Implications

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- We need to build a stronger commercial case for investment in cattle genetic improvement
- We need to better understand who gets the benefits
- Over reliance on breeder investment is sub-optimal and grave risk of deterioration in key traits
- Government and private investment in genomics is out of balance with breeder/farmer investment in trait recording (beef + dairy)!?

Where to?

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- Strong case for National and International cattle breeding structures!
- Need to be efficient and to minimise political interference (breed society, AI companies)
- Need to understand commercial drivers (beyond mathematics and genomics)
- ICBF is an excellent example of a modern cattle breeding structure