Data quality index

- The issue
- What is happening in other countries
- Review of current solutions in Ireland
- What we want to achieve for Ireland
- Some options going forward

The issue

- The whole industry benefits from genetic gain, international competiveness
- Rely on pedigree breeders to record data (cost and time) that drives genetic improvement in objective traits
- Free loaders – breeders that use indexes to sell bulls but make little effort to record data

Other countries

- Many countries/industries use reliabilities as sole definition of data quality
- Some countries have minimum reliabilities or else no BV available (Breedplan)
- NZ sheep, you can only get BVs out of certain evaluation modules if you record relevant traits.
  - Wormfec certification – brand mark on breeder reports
- Gold, Silver, Bronze flock status (Australian lamb plan)
  - Driven by breeders wanting to know what flocks they could safely buy rams from

Other countries cont.

- Take stock –Australia beef
  - Extensive diagnostics to describe genetic progress achieved in pedigree herds and why
  - Science driven
  - Not deployed because
    - Hard to communicate 1on 1 with many breeders
    - Losers as well as winners = politics

Ireland currently

How the Herd Data Quality Index is calculated (example only)

Herd Summary Data

Name	JIM FARMER	**Beef Pedigree HDQI: 71.28%**			
Address	DEMENSE		**Whole Herd**	**Pedigree**	**Commercial**
	TULLAMORE	**Beef Cows (at Year End)**	43	21	22
	CO OFFALY	**Calf Registrations**	46	36	10
Herd Designator	IE1234567	**AI Bred Registrations**	36	30	6
Index generated on	05-FEB-13	**ET Registrations**	17	17	0
Reporting Period	01-FEB-12 to 01-FEB-13	**Youngstock (250-500 days old, at Year End)**	22	20	2

Herd Scorecard - Pedigree Animals

	Birth Events				Pre and Post Weaning Events					
	1. Insemination	2. Sire Recording	3. Calving Survey	4. Birth Weights	5. Pre-Weaning Weight	6. Calf Docility	7. Calf Quality	8. Linear Score	9. Post-Weaning Weight	10. Average
Events / Calves (A)	36	36	36	36	20	20	20	20	31	
Completeness	5	36	18	32	20	20	20	18	23	
% of (A) Complete = (B)	13.89	100	50	88.89	100	100	100	90	74.19	**79.66**
Timely (within 21 days)	2	21	13	18	11	20	20	18	22	
% of (A) Timely = (C)	5.56	58.33	36.11	50	55	100	100	90	70.97	**62.89**
Overall Score ((B + C)/2)	9.73	79.17	43.06	69.45	77.5	100	100	90	72.58	**71.28**

1. Overall HDQI herd score

2. Overall completeness score

3. Overall timeliness score

9 criteria

- Equal weighting on criteria and on timliness vs completeness
- Future need to emphasise
  - completeness,
  - pedigree, and
  - weights
- Based on
  - Impact on index reliability

What we want to achieve

- Warn commercial bull and semen buyers of risk of daughters not achieving 4/5 star criteria
- Identify the herds with best data so industry initiatives can be targeted

Key drivers

- **For herds**
- Connectedness and bull sharing for valid comparisons across contemporary groups
- Number of traits recorded and percent of animal for each trait
- **For individual bulls**
- The index value
- Reliabilities and above herd criteria

Options going forward

- Existing data quality metric to be tweaked for identifying best herds for research and initiatives
- Widespread reporting of a bull level metric of how reliable the data is behind the index prediction