Sourcing the right stock

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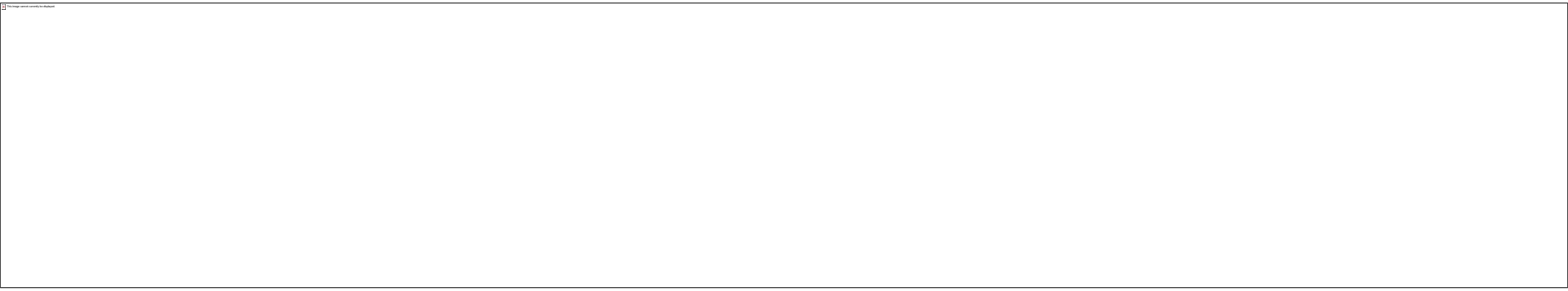
Ashleigh Fennell

Animal Group	Num of Cows	Milk Kg / Fat % / Prot %		Surv% / CI Days	Milk % Cont	Fertility % Cont	Calv % Cont	Beef % Cont	Maint % Cont	Mgmt % Cont	Health % Cont	EBI €
Cows with EBI	81	39			€ 45	€ 74	€ 34	€ -12	€ 12	€ 1	€ 3	€ 158
Missing EBI*	2	6.6	0.09	1.9	24.8%	41%	18.8%	-6.4%	6.5%	0.7%	1.8%	
Total Cows	83	5.9	0.08	-4.0								
1st Lactation	14	119			€ 55	€ 74	€ 37	€ -6	€ 7	€ 3	€ 2	€ 172
		7.3	0.05	1.6	29.6%	40.3%	19.9%	-3.3%	3.9%	1.7%	1.3%	
		8.5	0.08	-4.3								
2nd Lactation	67	22			€ 43	€ 74	€ 33	€ -13	€ 13	€ 1	€ 4	€ 155
		6.5	0.10	2.0	23.7%	41.2%	18.5%	-7.1%	7.1%	0.6%	1.9%	
		5.3	0.08	-4.0								



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Evan Kelly

Animal Group	Num of Cows	Milk Kg / Fat % / Prot %		Surv% / CI Days	Milk % Cont	Fertility % Cont	Calv % Cont	Beef % Cont	Maint % Cont	Mgmt % Cont	Health % Cont	EBI €
Cows with EBI	**119**	**-33**			**€ 59**	**€ 59**	**€ 35**	**€ -22**	**€ 22**	**€ 5**	**€ 1**	**€ 157**
Missing EBI*	0	9.8	0.20	1.7	29.2%	29%	17.1%	-11.1%	10.7%	2.3%	0.6%	
Total Cows	119	6.1	0.13	-2.9								
1st Lactation	**119**	**-33**			**€ 59**	**€ 59**	**€ 35**	**€ -23**	**€ 22**	**€ 5**	**€ 1**	**€ 157**
		9.8	0.20	1.7	29.2%	29%	17.1%	-11.1%	10.7%	2.3%	0.6%	
		6.1	0.13	-2.9								

2. Dairy Youngstock

2020 Calves	**54**	**-44**			**€ 83**	**€ 60**	**€ 35**	**€ -35**	**€ 33**	**€ 4**	**€ 0**	**€ 181**
Missing EBI*	0	14.8	0.30	2.1	33.2%	23.9%	14%	-14%	13.2%	1.7%	0%	
Total Calves	54	8.3	0.18	-2.7								

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Milk Solids

- What is milk solids?
  - How do you calculate?
  - Cow doing 25 litres @ 3.5% protein and 4% fat
    - 25 x 1.03 (converting to kg) = 25.75kg
    - 3.5% + 4% (MS %) = 7.5%
    - So 7.5% of the weight is milk solids
    - 25.75 x 0.075 = 1.93kg MS

Challenge?

- Which brings in more money?
  - 500 kg MS cow
    - One high volume low MS %
    - The other low volume high MS%

    - ANSWER: Both deliver 500kg!

A+B-C

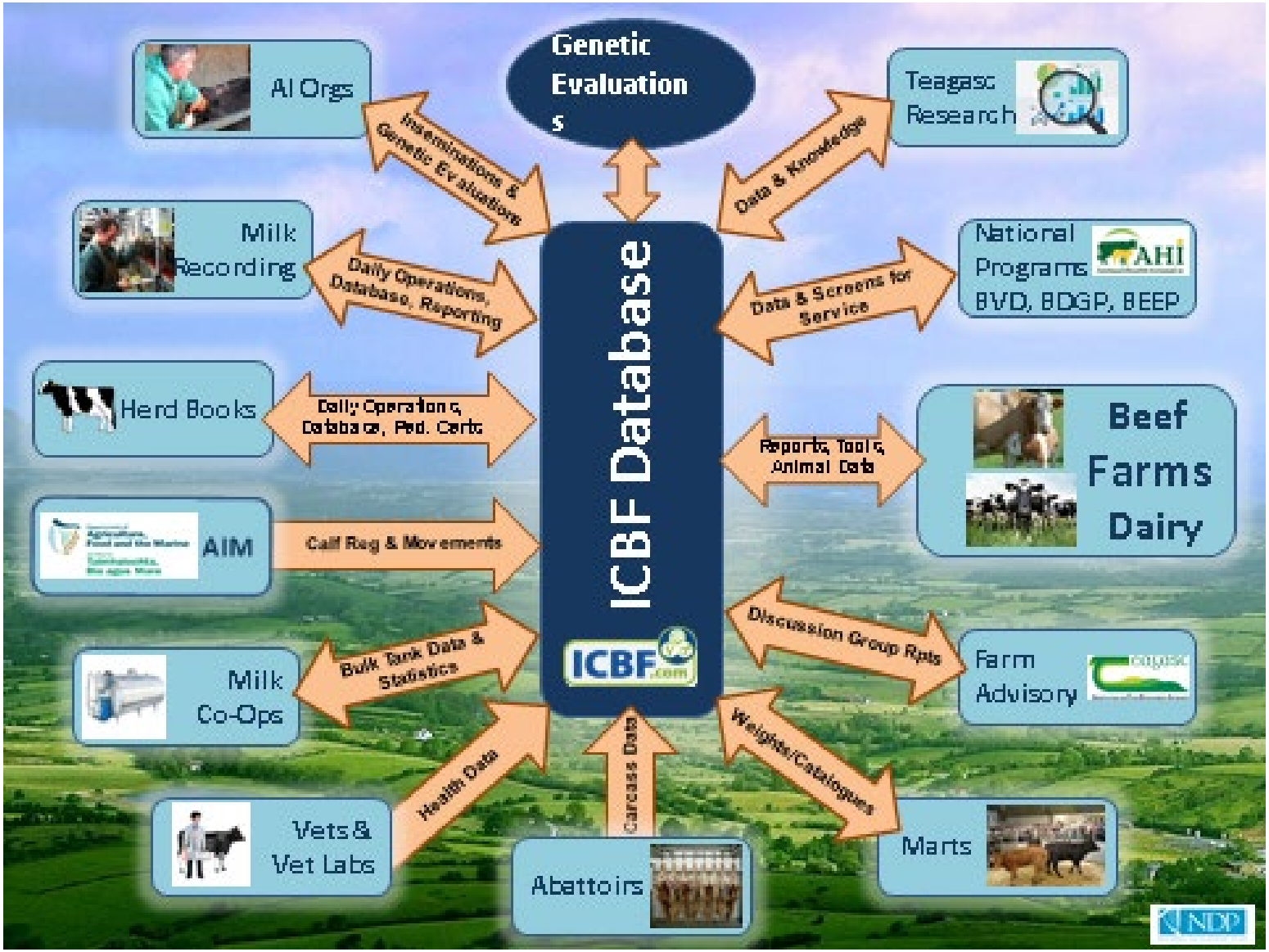
- All co-op's paying on solids
  - Critically important to Irish dairy Industry
  - How does it work?

  A = Protein

  B = Fat

  C = Volume adjustment

EBI



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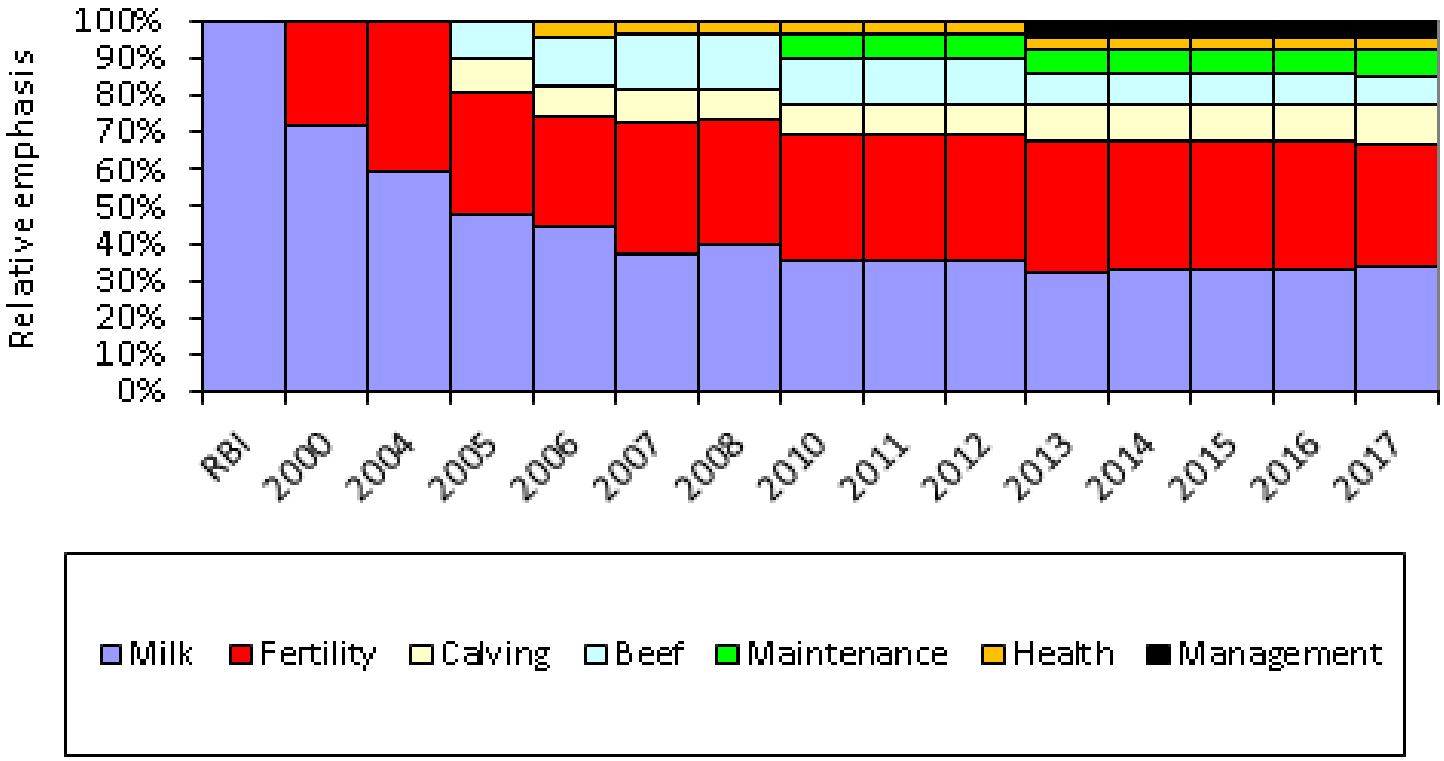
Evolution of the EBI (2000–2018)



- The ideal Irish dairy cow; High milk solids (+500 kg MS/cow/year) & excellent fertility (CI = 365 days).

EBI (€)

- €100 EBI – that cow will leave €100/lactation more than BASE COW
- Predicts what will be profitable cow in the future
- Made up of Sub index
  - Milk& fertility ~ 70%
  - Calving,beef,maint,mgmt&health ~ 30%

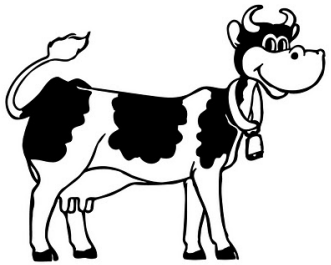
Base Cow

1. EBI Base change

Table 2: Base change in milk production and fertility for first calvers

	Base for production (305-day)			Base for fertility	
First Lact.	Milk yield	Fat/Prot KG	Fat/Prot %	Calv. Int.	Survival
Old base	5,192kg	196kg/171kg	3.79%/3.30%	404 days	80.0%
New base	5,743kg	224kg/195kg	3.90%/3.39%	400 days	82.5%

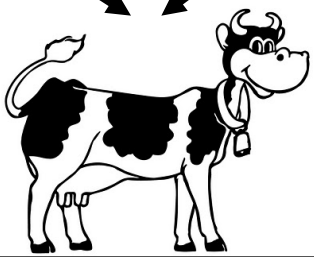
Parental Average



Cow €100 EBI

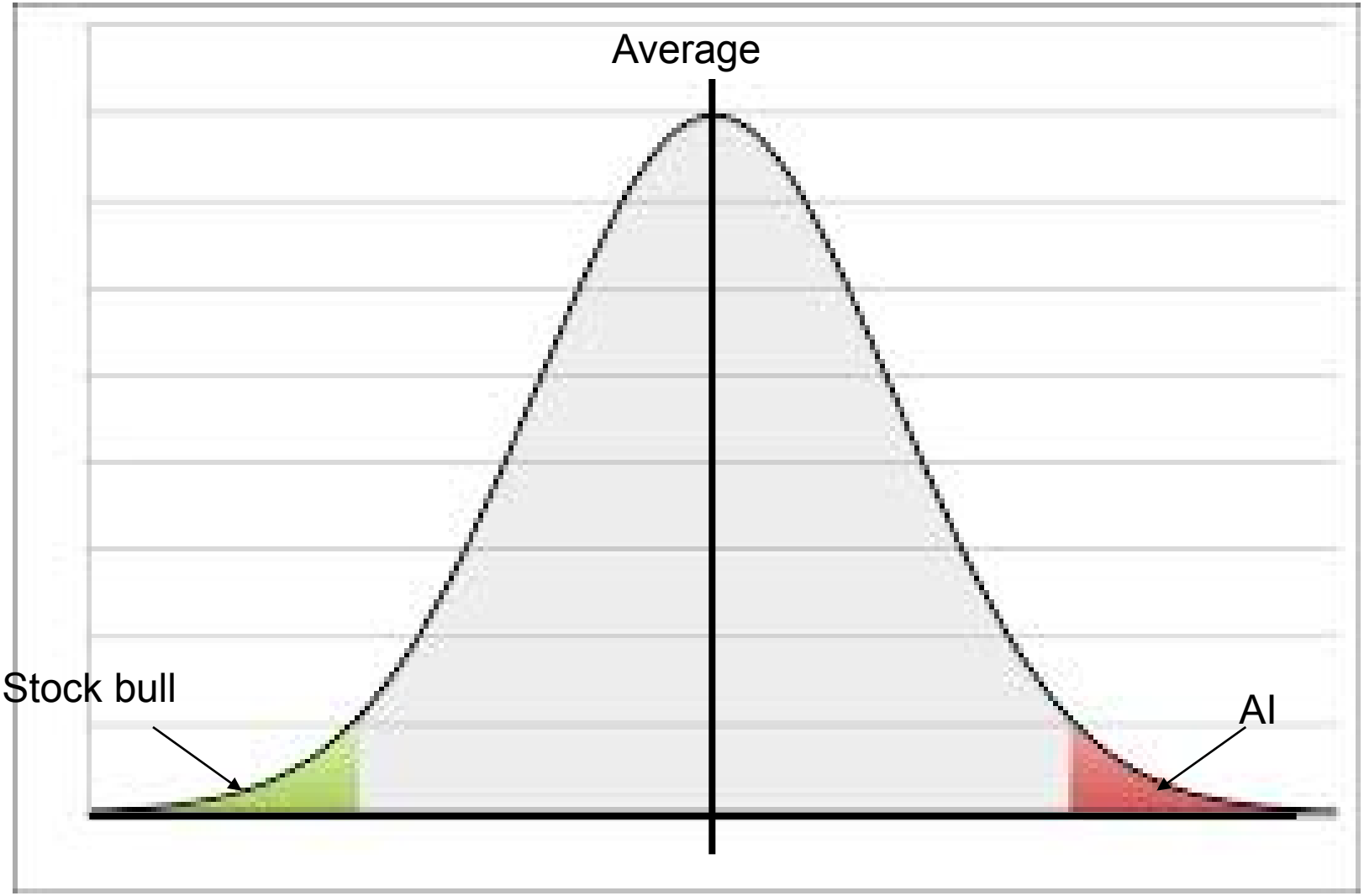
Bull €200 EBI

Heifer EBI
mother & fathers EBI and divide by 2

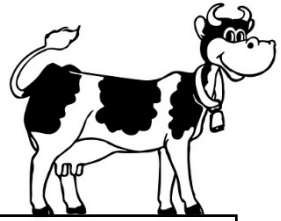


Heifer €150 EBI

Stock bull V AI

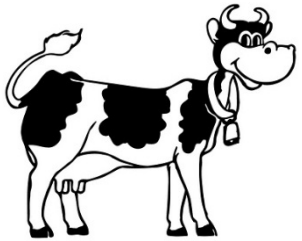


Genomics



Cow €100

Bull €200



Heifer €150

Search for genes for key production traits

Genomic Proof

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AI Selection

- Breeding is a slow process
  - Half the gain is lost in parental average
  - Only bringing in 20-25% heifers annually
  - Can take years to see significant gain
- Always Maximise the gain
- Select hard on key traits that will give you a more profitable herd

Does EBI work?

HerdPlus
Profit through Science

Economic Breeding Index (EBI) Herd Summary Aug 2013

LoCall 1850 600 900

Herd Owner:
Herd Number:
Data Extracted

1. EBI Herd Summary

Average EBI for all dairy cows with; (i) a known sire (or milk recorded progeny with a known sire) and (ii) are currently on your farm.

* Number of animals that are missing an EBI result

Animal Group	Num of Cows	Milk Kg	Fat %	Prot %	Surv%	CI Days	Milk % Cont	Fertility % Cont	Calv % Cont	Beef % Cont	Maint % Cont	Mgmt % Cont	Health % Cont	EBI €
								B						A
Cows with EBI	174	64					€ 41	€ 99	€ 28	€ -9	€ 11	€ 2	€ 0	€ 173
Missing EBI*	0	8.3	0.12		2.6		21.4%	52%	14.7%	-4.7%	5.8%	1.3%	0.2%	
Total Cows	174	6.1	0.08		-5.8									

C

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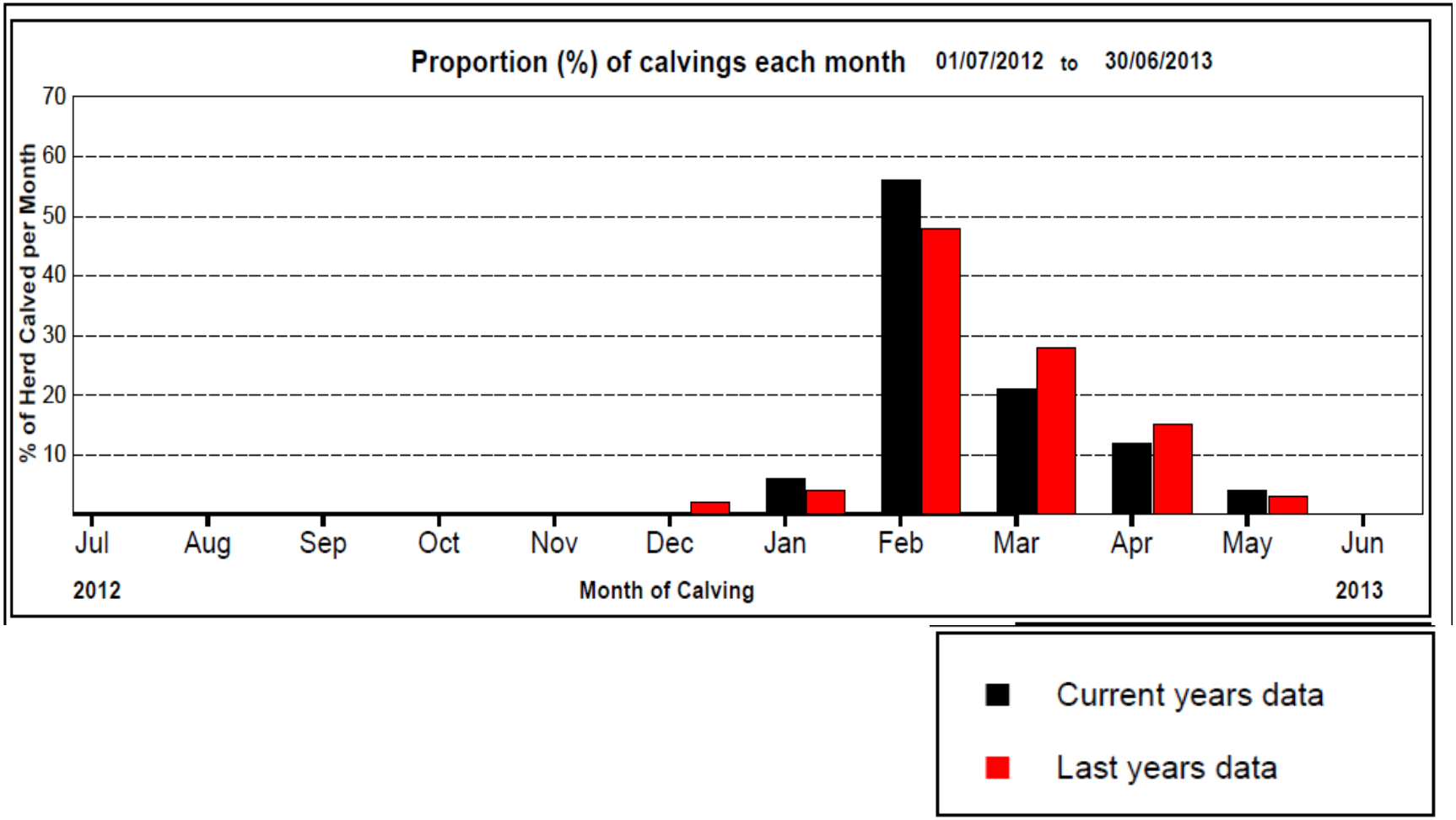
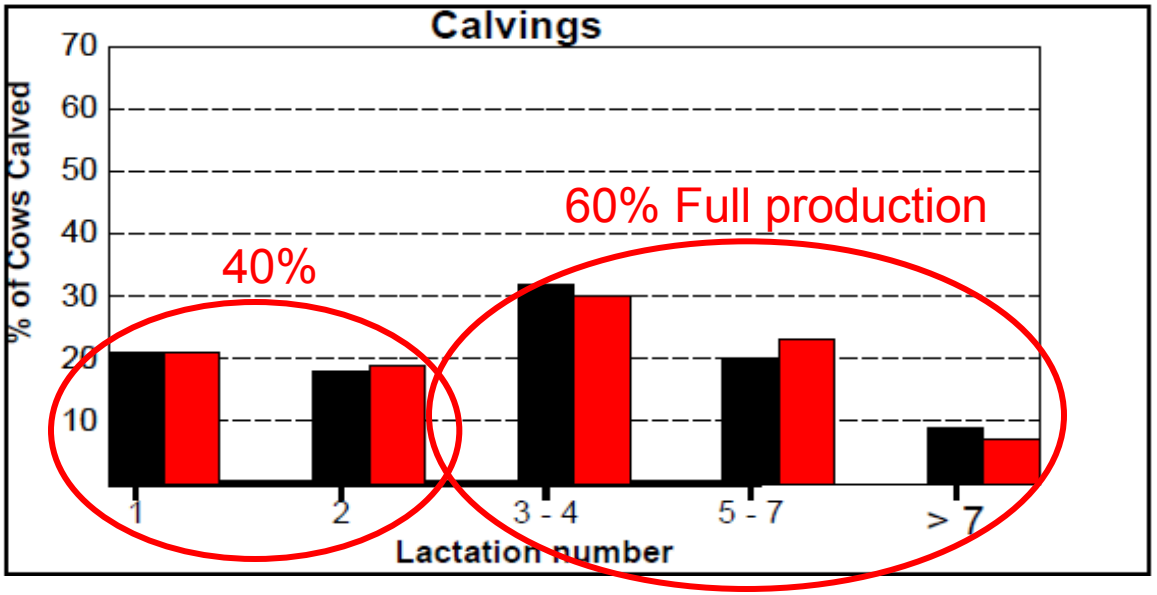
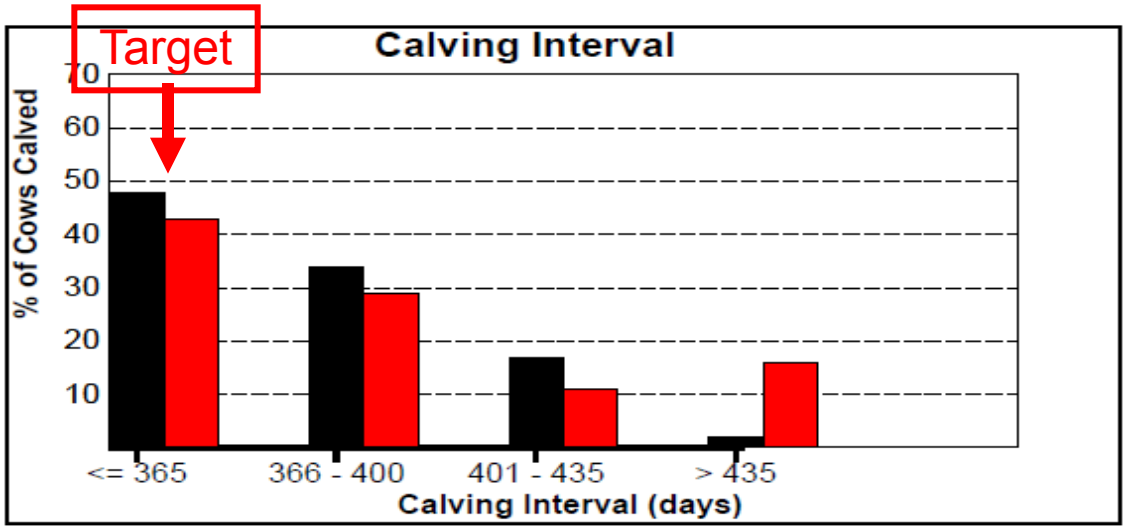
Heifers

Animal Group	Num of Cows	Milk Kg / Fat % / Prot %		Surv% / CI Days	Milk % Cont	Fertility % Cont	Calv % Cont	Beef % Cont	Maint % Cont	Mgmt % Cont	Health % Cont	EBI €
2. Dairy Youngstock												
13 Calves	68	55			€ 48	€ 102	€ 36	€ -9	€ 12	€ 2	€ 0	
Missing EBI*	11	10.0	0.16	2.7	22.9%	48.9%	17%	-4.5%	5.7%	0.9%	-0.1%	€ 190
Total Calves	79	6.8	0.1	-5.9								
12 Calves	73	115			€ 50	€ 93	€ 34	€ -5	€ 6	€ 2	€ 1	
Missing EBI*	0	9.8	0.11	2.5	26.3%	48.6%	17.8%	-2.9%	3.2%	0.9%	0.3%	€ 179
Total Calves	73	8.1	0.09	-5.3								

Fertility Performance







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Group	Number of cows recorded	Average days in milk	Test Day / Yield to date / 305 day yield M Kg	M Gall	F%	P%	L%	F Kg	P Kg	Ave SCC Test>250 No. Treats	EBI (Euros)
Overall	**174**	**222**	**18.5**	**3.9**	**4.33**	**3.78**	**4.65**	**0.8**	**0.7**	**174**	**173**
			5748	1228	3.81	3.37	4.74	219	194	27	
			6966	1488	3.93	3.45	4.74	274	241	14	
1st Lactation	**37**	**241**	**14.7**	**3.1**	**4.50**	**3.88**	**4.75**	**0.66**	**0.57**	**134**	**168**
			4468	954				74	154	4	
			5276	1127	4.01	3.52	4.84	212	186	1	
2nd Lactation	**32**	**223**	**17.8**	**3.8**	**4.34**	**3.85**	**4.64**	**0.78**	**0.69**	**151**	**168**
			5514	1178		3.43	4.72	205	189	4	
			6652	1421		3.51	4.72	257	234	0	
3rd Lactation	**26**	**221**	**19.2**	**4.1**	**4.46**	**3.86**	**4.64**	**0.86**	**0.74**	**254**	**170**
			6094	1302	3.95	3.38	4.73	241	206	5	
			7332	1566	4.08	3.47	4.73	299	254	0	
4+ Lactation	**79**	**214**	**20.3**	**4.3**	**4.24**	**3.70**	**4.64**	**0.86**	**0.75**	**168**	**179**
			6329	1352	3.76	3.33	4.73	238	210	14	
			7764	1658	3.88	3.41	4.73	301	264	13	

40%

60%

67% of full Production

85%

Full Production

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Lifetime production

- Herd average of 3 lactations per cow
  - 6,000l at full production
  - 6000 x 67% = 4020
  - 6000 x 85% = 5100
  - Combined lifetime production of 15,120l
  - Average 5,040l/cow
- Herd average of 5 lactations per cow
  - Same Calculation
  - Combined Lifetime production of 27,120l
  - Average 5,420l/cow

Milk Performance

Table 3: Lakeland/ICBF Performance Score Card

	Your Herd	Lakeland Average	Lakeland Top 10%	Your Rank out of 100	Your Star Rating [1]
Milk performance for 2012 (Jan - Dec) based on Lakeland data					
Fat + Protein (Kg/cow) Average Fat and Protein yield per cow for your herd	440	338	454	87%	* * * * *
Litres per Cow per Day Avg litres of Milk per cow from Jan - Dec 2012	14.95	12.4	16.5	77%	* * * *
Fat % to end December 2012 Weighted average Fat % from Jan - Dec 2012	4.3	3.98	4.2	96%	* * * * *
Protein % to end December 2012 Weighted average Protein % from Jan - Dec 2012	3.52	3.29	3.43	97%	* * * * *
Average Milk Price (cpl) Incl. VAT Average milk price received from Jan - Dec 2012, (Includes Bonuses/Penalties, Excludes Levies)	39.3	32.9	34.7	100%	* * * * *
SCC (,000 cells/ml) The weighted average Somatic Cell Count for Jan - Dec 2012	116	252	142	95%	* * * * *

Difference in price over base is worth €350/cow or €59,885 over the herd

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Sourcing Stock

- Minimum numbers of herds
- Match vaccination protocols (primary dose)
  - BVD
  - IBR
  - Salmonella
  - Lepto
- Should test for PI
- Dose on arrival
- Should quarantine if possible

Table 3: Lakeland/ICBF Performance Score Card

	Your Herd	Lakeland Average	Lakeland Top 10%	Your Rank out of 100	Your Star Rating [1]
Milk performance for 2015 (Jan - Dec) based on Lakeland data					
Fat + Protein (Kg/cow) Average Fat and Protein yield per cow for your herd	513	375	482	95%	* * * * *
Litres per Cow per Day Avg litres of Milk per cow from Jan - Dec 2015	15.28	13.66	17.6	69%	* * * *
Fat % to end December 2015 Weighted average Fat % from Jan - Dec 2015	5.01	3.99	4.24	100%	* * * * *
Protein % to end December 2015 Weighted average Protein % from Jan - Dec 2015	3.93	3.4	3.56	100%	* * * * *
Average Milk Price (cpl) Incl. VAT Average milk price received from Jan - Dec 2015, (Includes Bonuses/Penalties, Excludes Levies)	36.1	29.9			
SCC (,000 cells/ml) The weighted average Somatic Cell Count for Jan - Dec 2015	130				

249kg MS/cow difference

Worth €996/cow

Table 3: Lakeland/ICBF Performance Score Card

	Your Herd				Rating [1]
Milk performance for 2015 (Jan - Dec) based on Lakeland data					
Fat + Protein (Kg/cow) Average Fat and Protein yield per cow for your herd	264	375	482	11%	*
Litres per Cow per Day Avg litres of Milk per cow from Jan - Dec 2015	9.05	13.66	17.6	9%	*
Fat % to end December 2015 Weighted average Fat % from Jan - Dec 2015	4.22	3.99	4.24	89%	* * * * *
Protein % to end December 2015 Weighted average Protein % from Jan - Dec 2015	3.55	3.4	3.56	89%	* * * * *
Average Milk Price (cpl) Incl. VAT Average milk price received from Jan - Dec 2015, (Includes Bonuses/Penalties, Excludes Levies)	30.6	29.9	31.5	75%	* * * *
SCC (,000 cells/ml) The weighted average Somatic Cell Count for Jan - Dec 2015	258	197	102	20%	*

Sourcing stock

- USE EBI
  - Look for co-op performance report
  - EBI for the herd
  - ICBF catalogue
  - Milk recordings
  - Buy AI bred stock in calf to AI where possible

Vaccination Protocol

Example only: Ballyhaise Dairy Vaccination Planner

Red=Cows Green=0-1 heifers Blue=1-2 heifers

	JAN	FEB	MAR	APR	MAY	JUN	JUL	SEPT	OCT	DEC
TUES						2		1		1
WED	1			1 Bovidec, leptavoid H Tribovax T, bovidec, Leptavoid H		3	1	2		2
THU	2			2		4	2	3	1	3
FRI	3			3	1 Tribovax T	5	3	4	2	4
SAT	4			4	2	6	4	5	3	5
SUN	5		1	5	3	7	5	6	4	6
MON	6 Rotavec	Rotavec	2 Bovidec, leptavoid H Tribovax t	6	4	8	6	7	5	7
TUES	7		3	7	5	9	7	8	6	8
WED	8		4	8	6	10	8	9	7	9
THU	9		5	9	7	11	9	10 Salmonella Bovivac S Salmonella Bovivac S	8	10
FRI	10		6	10	8	12	10	11	9	11
SAT	11		7	11	9	13	11	12	10	12
SUN	12		8	12	10	14	12	13	11	13
MON	13		9	13	11	15	13	14	12 Salmonella Bovivac S	14
TUES	14		10	14	12	16	14	15	13	15
WED	15		11	15	13	17	15	16	14	16
THU	16		12	16	14	18	16	17	15	17
FRI	17		13	17	15	19	17	18	16	18
SAT	18		14	18	16	20	18	19	17	19
SUN	19		15	19	17	21	19	20	18	20
MON	20		16	20	18	22 IBR: Rispoval Rispoval Rispoval	20	21	19	21 IBR Rispoval Rispoval Rispoval
TUES	21		17	21	19	23	21	22	20	22
WED	22		18	22	20	24	22	23	21	23
THU	23		19	23	21	25	23	24	22	24
FRID	24		20	24	22	26	24	25	23	25
SAT	25		21	25	23	27	25	26	24	26
SUN	26		22	26	24	28	26	27	25	27
MON	27		23	27	25	29	27	28	26	28
TUES	28		24	28	26	30	28	29	27	29
WED	29		25	29	27		29	30	28	30
THU	30		26	30	28		30		29	31
FRI	31		27		29		31		30	
SAT			28		30				31	
SUN			29		31					
MON			30							
TUE			31							

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