

SAMPLE
SAMPLE
SAMPLE
CO KERRY

T: 064 12345

M353871234567

E:SAMPLE@GMAIL.COM

Herd Number: H1234567

Print Date: 29/11/2016

Personalised Notebook

- This notebook has been personalised for you to allow easy recording of important Animal Events data.
- It is important to transfer Animal Events data on a regular basis in case of loss of notebook.
- Always ensure that all animal events data (especially births and dry offs) are sent to ICBF prior to the next milk recording visit.

You can also record the following Animal Events online through the OnLine Services section of our website at www.icbf.com:

1. AI/Natural Serves.
2. Pregnancy Diagnosis.
3. Dry-offs.
4. Health/Culling Events.
5. Weighings.
6. Allocation of Freeze Brands/Jumbos.
7. Adding Missing Sires.
8. Body Condition Scores.

To record these Animal Events, click on the "Record Events" button on the right of the Herdplus screen. Then click on the relevant events you wish to record. Note that it may take 10-15 seconds to retrieve your data depending on the speed of your Internet connection and the size of your herd.

If you have any questions on any aspects of this notebook or any other ICBF related matter, please contact the HerdPlus Support Staff on 1850-600-900 or email herdplus@icbf.com

Irish Cattle Breeding Federation,
Highfield House,
Bandon,
Co. Cork.

2017

January						
M	Tu	W	Th	F	Sa	Su
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

February						
M	Tu	W	Th	F	Sa	Su
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28					

March						
M	Tu	W	Th	F	Sa	Su
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

April						
M	Tu	W	Th	F	Sa	Su
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

May						
M	Tu	W	Th	F	Sa	Su
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

June						
M	Tu	W	Th	F	Sa	Su
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

July						
M	Tu	W	Th	F	Sa	Su
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

August						
M	Tu	W	Th	F	Sa	Su
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

September							
M	Tu	W	Th	F	Sa	Su	
					1	2	3
4	5	6	7	8	9	10	
11	12	13	14	15	16	17	
18	19	20	21	22	23	24	
25	26	27	28	29	30		

October						
M	Tu	W	Th	F	Sa	Su
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

November						
M	Tu	W	Th	F	Sa	Su
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

December							
M	Tu	W	Th	F	Sa	Su	
					1	2	3
4	5	6	7	8	9	10	
11	12	13	14	15	16	17	
18	19	20	21	22	23	24	
25	26	27	28	29	30	31	

Understanding the Economic Breeding Index.

What is EBI?

EBI is a single figure profit index aimed at helping farmers identify the most profitable bulls and cows for breeding dairy herd replacements. It comprises of information on seven sub-indexes related to profitable milk production. These are (1) milk production, (2) fertility, (3) calving performance, (4) beef carcass (5) cow maintenance (6) cow management and (7) health.

Table 1. Economic values & % emphasis of the various traits in the EBI formula.

EBI Sub - Index	Trait	Economic Weight	Trait Emphasis	Overall Emphasis
Production	Milk	-0.09	10.6%	33%
	Fat	1.04	3.4%	
	Protein	6.64	18.9%	
Fertility	Calving Interval	-12.43	24.0%	35%
	Survival	12.01	10.9%	
Calving	Direct Calving Difficulty	-3.52	2.8%	9%
	Maternal Calving Difficulty	-1.73	1.3%	
	Gestation Length	-7.49	4.1%	
	Calf Mortality	-2.58	1.0%	
Beef	Cull Cow Weight	0.15	0.7%	9%
	Carcass Weight	1.38	5.1%	
	Carcass Conformation	10.32	1.7%	
	Carcass Fat	-11.71	1.1%	
Maintenance	Cull Cow Weight	-1.65	7.2%	7%
Management	Milking Time	-0.25	2.1%	4%
	Milking Temperament	33.69	1.9%	
Health	Lameness	-54.26	0.6%	3%
	SCC	-43.49	1.8%	
	Mastitis	-77.10	0.8%	

Genetic Evaluations

Knowing the generic merit of your herd is a key component to successfully improving traits of importance on your farm. The observed performance (e.g. 305 day milk yield) of an individual cow depends on two things:

- a) The genetic merit of the cows
- b) The environment in which she is performing.

Genetic evaluations attempts to disentangle the effects of genes and the environment in order to select animals that have high genetic merit, and not those that perform well simply because they are well managed and fed. For example, if Cow X has a much higher genetic merit for milk yield than Cow Y, Cow Y will need much more feed to milk the same as Cow X. Alternatively, if Cow X and Y are fed the same, Cow X will outperform Cow Y for milk yield. Genetic evaluations allow us to directly compare animals

that are performing in many environments, by removing the part of the observed performance that is due to the environment and management of cows.

We cannot directly alter the genetic merit of an individual cow, however improvements can be made for specific traits in the offspring of the cow provided she is bred to a sire that is better than she is for those traits. Therefore it is important to know both the genetic merit of a cow and the sire in order to make genetic improvements in traits of economic importance.

How do I interpret the Predicted figures for Milk kg, Fat kg, Protein kg, etc.?

We call these Predicted Transmitting Ability figures (PTAs). An animal's PTA indicates the amount of a particular trait an animal is expected to pass onto its progeny relative to the base population (See [Table 2](#)). The PTA is equal to half of its own Breeding Value since a cow only passes on half her genes to her offspring. All values on the EBI report are expressed as PTA's. Information on bulls (in catalogues, bull search etc.) is also presented in terms of PTA.

	Milk kg	Fat kg	Prot kg	Fat%	Prot %	CI days	Surv %
Base Cow Performance	5743	224	195	3.90	3.39	400	82.5

Table 2. Base Population Performance - 2005 born cows, calved and milk recorded in 2007.

The daughters of a bull with a PTA of 150kg for milk yield would be expected to produce, on average, 100kg more milk per lactation than daughters of a bull with a PTA of 50kg if their dams have equal genetic merit. The actual difference will not be exact for comparing individual daughters because no two daughters' would get exactly the same combination of genes or be exposed to exactly the same environment. Thus, daughters of the same sire may have varying performance.

Example:

Cow 972 (**Fig 1.** below) has a Milk kg PTA of **+167kg** which means that she would be expected to produce 334kg more milk than the base cow (167kg x 2 =334kg). If she is mated to a bull with Milk kg of **+233kg** the resultant offspring will have a potential for milk (i.e. Breeding Value) of **+400kg**.

FB	Cow ID	Sire ID	Sire EBI	C. Date	Milk Kg		Milk	Fertility	Calving Health	Beef Mainten	EBI €
Name		Dam FB	Dam EBI	Age	Fat Kg	%					
Breed		MG Sire ID	MGS EBI	Lact.	Prot Kg	%					Herd Rank
972	IE151613760972	RUU	158	25/01/2009	167		€ 25	€ 32	€ 26	€ 5	€ 84
P TRUDY B		383	39	3y 2m	0.0	0.06			€ 3	€ -9	
HO 93.8%		ASI	34	1	5.6	-0.01					64

Fig 1. Example of an animal's PTA in the EBI Report

Does this mean the offspring, assuming a heifer, will actually milk 400kg more than the "base cow" (5743kg + 400kg) = 6143kg? The answer always depends on the level of management - the heifer will be genetically capable of milking 400kg more than the base cow but how much she physically outperforms the base cow will be dependent on the management. In a higher input environment she could perform much more than this or in a lower input environment it may be less than this.

Key Point: Although the potential of the offspring heifer is **+400kg**, she will only pass on half of this to her own offspring, therefore her PTA for milk kg is **+200kg**(1/2 her Breeding Value) and this is what is displayed on the EBI report.

In simple terms, in order to improve the potential of a cow's offspring to milk more, you need to use bulls that have a higher PTA for milk kg than the cow itself. The same applies to all other traits, be it milk solids yield, fat and protein % or calving interval and survival.

When selecting a team of bulls for your cows you should pick bulls that are higher than the herd PTA for the traits you want to improve. To improve individual cow weaknesses use the cow PTA to help you determine the best bull to use on her.

Expected Calving Details

FB	Comp Lact	(Expected) Calving Date	(Expected) Sire of Calf	(Exp) FBI
893	0	02/01/17	HZB	194
742	3	04/01/17	FR2119	172
927	0	06/01/17	CFF	140
921	0	09/01/17	YAD	188
796	3	11/01/17	ZCH	
849	1	12/01/17	FR2119	182
890	0	13/01/17	YAD	188
817	2	13/01/17	ZAG	
904	0	16/01/17	CFF	153
746	2	18/01/17	ZAG	
871	1	21/01/17	FAD	149
865	1	22/01/17	FR2056	181
789	3	22/01/17	FR2056	200
818	2	28/01/17	ZCH	

Expected Calving Details

FB	Comp Lact	(Expected) Calving Date	(Expected) Sire of Calf	(Exp) FBI
889	0	29/01/17	YAD	179
782	3	31/01/17	FR2056	187
837	2	03/02/17	FR2119	183
892	0	04/02/17	FR2032	192
920	0	07/02/17	CFF	152
872	1	12/02/17	YAD	171
819	1	14/02/17	FR2119	179
926	0	19/02/17	YAD	183
836	2	19/02/17	OKH	
917	0	23/02/17	YAD	194
848	1	23/02/17	YAD	125
888	0	25/02/17	CFF	146
866	1	28/02/17	FR2119	184
895	0	01/03/17	FR2007	205

Expected Calving Details

FB	Comp Lact	(Expected) Calving Date	(Expected) Sire of Calf	(Exp) FBI
869	1	02/03/17	CFF	104
783	3	02/03/17	OKH	
773	3	05/03/17	ZAG	
788	3	06/03/17	OKH	
833	2	08/03/17	FR2079	199
702 *	4	09/03/17	FR2056	188
880	1	18/03/17	FR2056	200
894	0	19/04/17	GPZ	
832	2	06/05/17	DPS	
684	5	05/06/17	HE2043	
786	3	29/06/17	DPS	
803	3	19/07/17	FSZ	
891	0	27/07/17	HE2043	
799	2	03/08/17	ZAG	

Expected Calving Details

FB	Comp Lact	(Expected) Calving Date	(Expected) Sire of Calf	(Exp) FBI
847	1	12/08/17	HE2043	
764	2	15/08/17	ZAG	

* = Twins

Record Calving Event

Sire ID	Calving Ease				Notes
	1	2	3	4	
	1	2	3	4	
	1	2	3	4	
	1	2	3	4	
	1	2	3	4	
	1	2	3	4	
	1	2	3	4	
	1	2	3	4	
	1	2	3	4	
	1	2	3	4	
	1	2	3	4	
	1	2	3	4	
	1	2	3	4	
	1	2	3	4	

Record Calving Event

Calving Date	Dam ID	Last 5 digits of Calf	Sex

Record Calving Event

Sire ID	Calving Ease				Notes
	1	2	3	4	
	1	2	3	4	
	1	2	3	4	
	1	2	3	4	
	1	2	3	4	
	1	2	3	4	
	1	2	3	4	
	1	2	3	4	
	1	2	3	4	
	1	2	3	4	
	1	2	3	4	
	1	2	3	4	