



IRISH CATTLE BREEDING FEDERATION

Genetic Improvement of Cattle – Now and in the Future.

Niall Kilrane & Brian Wickham
RDS “Champion of Champions”
Friday 10th December 2010



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Thank you Chairman. Ladies & Gentlemen, firstly, let me offer my personal congratulations to all of today's winners. Today you have joined an elite group of breeders recognised for the very special attributes possessed by your animals.

What I want to do, in the limited time I have today, is to highlight recent developments in Irish cattle breeding and how these can play an important role in finding the future champion of champions. The challenge for cattle breeders has never been greater and the tools available, and becoming available, never better or easier to use. Irish farmers want you to breed a very special animal for them. What is this animal? How can you breed it?

...

Content

- What do Irish farmers want cattle to do for them?
- What tools can Irish farmers use to find the best cattle to breed from?
- Summary



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To answer this, I am going to address just two questions:

What do Irish farmers want cattle to do for them?

What tools can Irish farmers, and breeders, use to find the best cattle to breed from?

I will finish with a short summary.

1. What do farmers want?

Dairy Farmers	Beef Farmers
• Income (€) +++++ - Milk (protein, fat – lactose, water) - Meat - Weaners - Breeding stock • Expenses (€) ----- - Feed - Replacements - Health - Labour • Profit = Income - Expenses	• Income (€) +++++ - Meat - Weaners - Breeding stock • Expenses (€) ----- - Feed - Replacements - Health - Labour • Profit = Income - Expenses

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This was one of the first questions that ICBF addressed when it started operations in 1998. It turns out that the answer is very simple.

Dairy farmers want cattle that will generate the maximum income from the minimum cost. Or in other words they want cattle to maximise the profits they can make from farming. Either increases in income: – milk, meat, surplus young animals – I call them weaners – and breeding stock, or reductions in costs: feed, replacements, reduced health costs or reduced labour costs. Or a combination of both increased income and reduced costs. In any case increased profits are what they want. **Click**

Not surprisingly, it turns out that beef farmers want the same from a remarkably similar set of traits, albeit with different emphasis on some of the traits. This presents a serious challenge to us cattle breeders. Farmers want a balance, not just any balance, but the one that generates the greatest profits.

Getting the balance right is one of the most important aspects of cattle breeding. Will the extra kg milk protein generate more income than it costs to produce? Will the extra kg live weight in

the weanling generate more income than it costs to produce?

The principles for dairy and beef are remarkably similar. Many of the income and expense traits are in common.

2. How to find the best cattle to breed from?

1. Rank candidates on the merit of future progeny.
2. Candidates – AI bulls worldwide, stock bulls in Ireland, cows & heifers in own herd.
3. Progeny Merit – genetic evaluations and indexes.
4. Complicated by disease regulations & risks.

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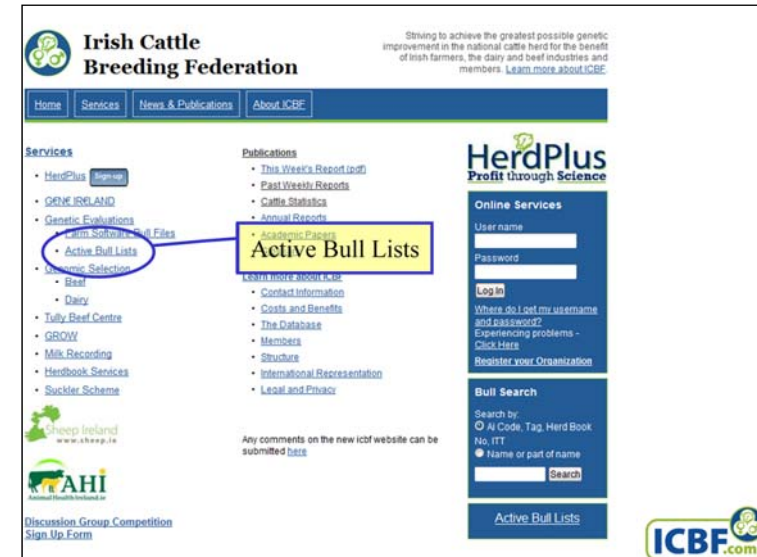
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Now, how can you find the best cattle to breed from. In simple terms, what you need to do is to rank candidates on the merit of their future progeny, or ideally the progeny that will result if you used them to breed in your herd.

The **range of potential candidates** is enormous as it is possible to access animals from many other countries world-wide. In practical terms, most farmers and breeder,s are restricted to the bulls available through AI or for use as stock bulls in Ireland. On the female side the restrictions are even greater – most farmers are limited to the cows and heifers in their herd. They can, of course, buy-in replacement females but in doing so expose themselves to considerable disease risk.

Obtaining information on the **merit of future progeny** has undergone a major revolution in Ireland and this is the heart of what I want to cover with you today.



Firstly, the bulls currently available in AI are in the Active Bull Lists on our website – www.icbf.com - under the Genetic Evaluation services heading of the home page. **Click**

Click on the “Active Bull Lists” and that will bring you to this page.

Presentation Notes - RDS

Irish Cattle Breeding Federation

Striving to achieve the greatest possible genetic improvement in the national cattle herd for the benefit of Irish farmers, the dairy and beef industries & members. [Learn more about ICBF](#)

Home Services News & Publications About ICBF

Active Bull Lists

Dairy
[Current List](#)

Beef
[Current List](#)

2010 Autumn 2010 ([Pdf](#), [Excel](#))
 Support Material: [Guide](#), [Review and Analysis](#)
 Spring 2010 ([Pdf](#), [Excel](#))
 Support Material: [Guide](#), [Review and Analysis](#)

2009 Autumn 2009 ([Excel](#))
 All Active Dairy Bulls Autumn 2009 ([Excel](#))
 Spring 2009 ([Excel file](#))

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There is a Dairy and **click** Beef “Current List”. These lists are “live” in that they are maintained by the AI Centres. As new bulls enter AI they are added and when semen stocks run out the bulls are removed. Let me know if you find a bull on the list for which semen is not available. These current lists have replaced the previous “static” lists.

Lets go to the Beef list.

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Beef Active Bull List

[View as Excel](#)

Evaluation Date: Aug 2010

Tag	Bull Name	Breed	Suckler Beef Value		Weanling Export		Beef Carcass		Daughter Milk		Daughter Fertility		Calving Difficulty		Docility		Supplier	Price	Avail
			€ Star	Rel	€ Star	Rel	€ Star	Rel	€ Star	Rel	€ Star	Rel	€ Star	Rel	€ Star	Rel			
<u>NFU</u>	NETHERTON FLEUR'S LEGACY	AA	€ 123	35%	€ 48	41%	€ 52	32%	€ 120	10%	€ 30	2%	3.2	52%	0.6	35%	NBC	40	Medium
<u>VPH</u>	BELVIN PATRIARCH	AA	€ 104	79%	€ 26	65%	€ 20	81%	€ 140	10%	€ 61	2%	2.8	50%	0.3	35%	NBC	40	Medium

Evaluation Date: Aug 2010

Tag	Bull Name	Breed	Suckler Beef Value		Weanling Export		Beef Carcass	
			€ Star	Rel	€ Star	Rel	€ Star	Rel
<u>NFU</u>	NETHERTON FLEUR'S LEGACY	AA	€ 123	35%	€ 48	41%	€ 52	32%
<u>VPH</u>	BELVIN PATRIARCH	AA	€ 104	79%	€ 26	65%	€ 20	81%

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This is the start of the beef active bull list. I have magnified the top left corner so you can see the detail a little more clearly. **Click**

The information is self explanatory – VPH is the AI Code for the AA bull – Belvin Patriarch the second highest Angus (AA) bull on SBV currently (Friday 26th November) available through AI in Ireland. This bull is five stars for suckler beef value (within breed) placing him in the top 20% for the Angus breed.

The active bull list contains (as of Monday 29th Nov) 342 beef bulls that Irish AI companies have available for sale. That is a lot of bulls.

Just before we dig a bit deeper – **click** notice that you can “View as Excel” – click on this and the entire list of bulls is loaded to your computer as an Excel Spreadsheet – you can sort and summarise as much as you like. Think about this – here are the 342 beef bulls currently available through AI in Ireland – you can look for the bulls with the traits that are most important to you – SBV – weanling export – beef carcass – daughter milk – daughter fertility – calving difficulty – docility – and then you can dig deeper.

Notice how his code VPH is underlined. This means you can click

Presentation Notes - RDS

on this to get more information. Do this and you come to this page.

Presentation Notes - RDS

ICBF Genetic Evaluations Service						
Euro-Star Rating (ICBF, Aug 2010)						
VPH	Breed:	AA (100%)	Sire:	BELVIN KINGPIN 24'00 / 1029275		
e: BELVIN PATRIARCH	Owner:	BOVA AI	Dam:	BELVIN LADY BLOSSOM 22'02 / 1132985		
: 12-JAN-2004	Date of Evaluation:	Aug 2010	MGS:	O G L BATTLE CRY 427 128 / IMP5320D		
		Euro-star Index	Calving Traits	Weanling	Beef Carcass	M
		Linear Type	Pedigree	Fertility	Prev Eval	
Blups						
% Rank	Star Rating (within breed)	Index and Traits	euro-Value	Data Reliability	Star Rating (across breed)	% Rank
99%	★★★★★	Suckler Beef Value (SBV)	€104	79%	★★★★★	78%
99%	★★★★★	Weanling Export	€26	65%	★★	29%
94%	★★★★★	Beef Carcass	€20	81%	★★	23%
59%	★★★★	Daughter Fertility	€61	32%	★★★★★	82%
99%	★★★★★	Daughter Milk	€149	30%	★★★★★	99%
Other Key Traits						
20%	★	Calving Difficulty (% 3 or 4)	2.77%	96%	★★★★★	87%
96%	★★★★★	Gestation Length (Days)	~.79 Day(s)	92%	★★★★★	99%
57%	★★★	Docility (1-5 score)	0.03	83%	★★★★	68%

This page gives the latest, and complete, genetic evaluation for VPH.

The Euro-Stars are a very quick, and simple, way of getting a quick appreciation for the strengths and weaknesses of this bull.

If you want more information then **click** one of the buttons – eg Calving Traits (he is one star within the Angus Breed for calving difficulty. Where did this come from?

Lets have a look.

Presentation Notes - RDS

Progeny and Progeny Herd Mate Information										
No. of Births	Herd Mate Births	Scored 3 or 4 (%)	Herd Mate Scored 3 or 4 (%)	Male Births	1st Parity		2nd Parity		3rd parity	
					Records	Scored 3 or 4 (%)	Records	Scored 3 or 4 (%)	Records	Scored 3 or 4 (%)
365	2442	1	4	186 (51%)	122	3	72	0	171	1

Information on Dams of Progeny (Cows mated to the sire)												
Avg Calving Index (€)		Avg PTA Calving Difficulty		Average % in Dams By Breed								
				AA	BA	BB	CH	FR	HE	HO	LM	S
10	15	-4		88	0	0	1	1	1	3	1	1

Gestation (Days between insemination and calving)										
PTA	Reliability (%)	Percentile Rank		Average Mate PTA Gestation	Births	Herd Mate Births	Gestation (days)	Herd Mate Gestation		
		Within breed	Across Breed							
0	-79	92	96	99	0	117	357	282	285	

Mortality (% calves dead up to 28 days of age)										
PTA	Reliability (%)	Percentile Rank		Average Mate PTA Mortality	Births	Herd Mate Births	Mortality (%)	Herd Mate Mortality		
		Within breed	Across Breed							
0	-79	92	96	99	0	117	357	282	285	

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At this level you can see, in more detail, the information used in the calving trait evaluation for this bull:

1. No. of births and number of herdmate births – the basis for the comparison of this bull with other bulls. **Click**
2. % Male births and 1st, 2nd and 3rd parity birth – sex ratio and was he mated to just heifers? **Click**
3. The breed of the dams that the bull was mated to – mostly AA in this case **Click**
4. The details on gestation length etc.

So, if you are going to tackle the challenge of, breeding cattle that commercial beef producers can make the most profit from, here is one incredibly valuable resource to start with. The beauty of this system is that it is based on the performance of animals on Irish farms and in Irish meat factories. It is not perfect, and never will be, but you can be assured we are working our butts off to make it the best we can!

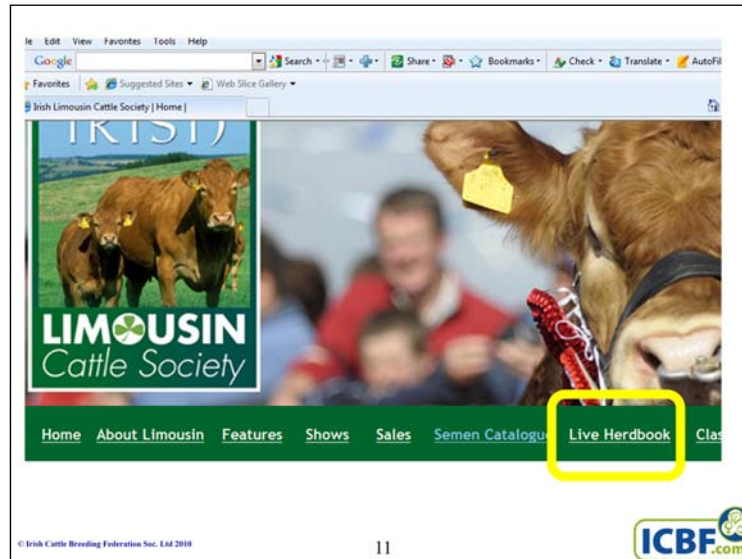
Not interested in using AI, or you want to know what pedigree cattle are available then there is another place you can go.

Presentation Notes - RDS

For Pedigree cattle there is a great service available from most of the Herd Books.

The On-Line Herd Book is supported by ICBF and is based on the information in the ICBF database.

Presentation Notes - RDS



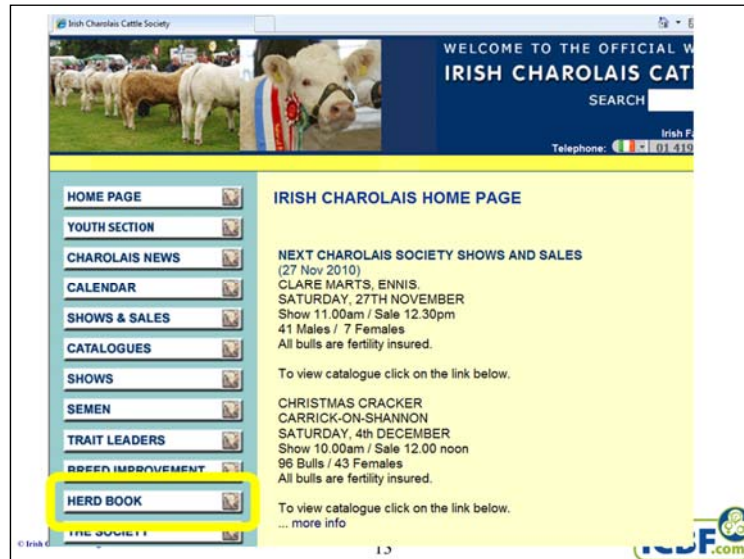
Irish Limousin

Presentation Notes - RDS



Irish Belgian Blue

Presentation Notes - RDS



Irish Charolais

Presentation Notes - RDS



Irish Simmental

Presentation Notes - RDS

Go to any of these and this is what you find. The “animal enquiry” – it is a place where you can find most any animal in the herd book.

The search is as simple or as complex as you want it – in my example I am looking for recently born (**less than 1 year old**) pedigree Limousin **bulls** (males) located in County **Cork**, in the top 1% on SBV, and this is what I found

Presentation Notes - RDS

Animal	Animal Name	Sire	Dam	DOB	Suckler Beef Value (€)	Calving Traits (€)	Weaning Exports (€)	Beef Carcass (€)	Milk and Fertility (€)	Call Quality (€)
IE221064520903	ARDLEA ESUAB	M		02/12/2009	170.00	-11.00	87.00	138.00	-4.00	351.00
IE141928660107	BARRYROE FIONN 2	M		11/01/2010	151.00	-8.00	74.00	127.00	-42.00	335.00
IE141928630112	BARRYROE FRANK	M		08/02/2010	148.00	-6.00	74.00	122.00	-37.00	324.00
IE141368830745	CARBERRY FREEDOM	M		04/03/2010	144.00	-14.00	67.00	135.00	-47.00	313.00
IE151602070352	MISTIC FABIO	M		02/06/2010	138.00	-22.00	78.00	132.00	-19.00	287.00
IE15151420549	GLEN NORTH FRANK 549	M		04/01/2010	137.00	-7.00	63.00	109.00	10.00	273.00
IE15151460560	GLEN NORTH FRANK 560	M		30/03/2010	134.00	-10.00	62.00	111.00	8.00	268.00
IE141787620359	SULANE FREDDIE	M		04/03/2010	132.00	-12.00	61.00	112.00	13.00	259.00
IE141147870277	TOORMORE FOREST	M		23/04/2010	129.00	-16.00	63.00	116.00	13.00	250.00
IE15151440559	GLEN NORTH FRANK 559	M		27/03/2010	128.00	-9.00	59.00	110.00	-13.00	267.00
IE151871390013	PHOENIX ELMO	M		23/12/2009	128.00	-12.00	60.00	100.00	67.00	218.00
IE15151490563	GLEN NORTH FRANK 563	M		05/04/2010	126.00	-9.00	58.00	108.00	-13.00	259.00
IE15151490555	GLEN NORTH FRANK 555	M		14/03/2010	126.00	-9.00	55.00	101.00	23.00	245.00
IE141475450885		M		02/01/2010	124.00	-4.00	54.00	110.00	-32.00	255.00

You can do this yourself – as long as you have access to the internet – remember it is breed specific and you need to go to the website for the breed you are interested in. A possible place to start is with the herd book members of ICBF – all the website links are there -

Sort the animals by clicking on the column heading – I clicked (twice) on Suckler Beef Value – see the down arrow showing the list is sorted on this column. I could have sorted on any of the columns.

Click

To get more details on each animal click on it – and this is what you will get ...

Presentation Notes - RDS

Animal Number: IE221064520903 Progeny: 0 Owner: DAN O'MAHONY

Animal Name: ARDLEA ESUAB Breed: LM (100%) Breeder: DANIEL TITIAN

Sex: Male Owner's Website:

Date of Birth: 02-DEC-2009

Grade: FED

Buttons: Ancestry Progeny Traits

Euro-Star Rating (ICBF, Aug 2010)

Within Breed	Index	Data rel	Across Breed
★★★★★	Sucker Beef Value	€ 170.00	34%
★★★★★	Beef Value		
★★★	Calving Traits	€ -11.00	32%
★★★★★	Weaning Exports	€ 87.00	43%
★★★★★	Beef Carcass	€ 138.00	37%
★★★★★	Replacement Value		
★★★★★	Milk & Fertility	€ -4.00	10%
★★★★★	Calf Quality	€ 351.00	40%
★★★★★	Other Key Traits		
★★★★★	Difficulty Calving	4.6%	40%

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Here is the top half – which contains the Owner (and Breeder if different) – click the owner to get a phone number and address. I clicked on **trait** to get the Euro-Star rating for this bull – the other options are **Ancestry** and **Progeny** (which is useful if you are looking at older bulls or older cows) –

The within breed Euro-Stars are high for this bull, as you would expect – he is the highest SBV young (<1) Limousin bull in Country Cork as of 29th Nov – when looking at indexes always have a look at the data reliability – 30% to 40% is a good reliability for a young bull – he needs to have many progeny to get a high data reliability.

The second half of this screen contains individual trait information

...

Presentation Notes - RDS

★★★★★ Calf Quality € 351.00 40%

★★★★★ Other Key Traits

★★★★★ Difficulty Calving 4.6% 40%

★★★★★ Docility .05 45%

Trait and index percentages Data Rel: 40% - 60% = Ave 20% - 40% = Below Ave < 20% = Poor

Weaning Export, Beef Carcass, & Replacement Calf Traits

Wean Wt Dir (kg)	21.86	Calv Int (days)	0.73
Wean Calf Quality (%)	20.46	Survival (%)	0.00
Carc Wt (kg)	29.75	Age 1st calv (days)	-0.04
Carcass Cond Score	1.97	Wean Wt Mat (kg)	6.60
Carcass Fat Score	-0.42	Calv Diff Mat (%)	6.95
Dry Matter Intake (kg)	-0.11	Cull Cow (kg)	28.39

Calving Traits

Calving Int	4.60	Muscle	126.00	54%
Gestation Len (days)	4.11	Skeletal	128.00	54%
Mort (%)	0.91	Functional	114.00	22%

BLUP Linear Type

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The traits are grouped according to the Euro-Star index that they contribute to - ...

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Irish Limousin Cattle Society Ltd.									
SEARCH RESULTS									
Animal Number	Animal Name	Sex	Dob	Suckler Beef Value (€)	Calving Traits (€)	Weaning Exports (€)	Beef Carcass (€)	Milk and Fertility (€)	Replacement Value (€)
IE221064520903	ARDLEA ESUAB	M	02/12/2009	170.00	-11.00	87.00	138.00	-4.00	351.00
IE141928660107	BARRYROE FIONN 2	M	11/01/2010	151.00	-8.00	74.00	127.00	-42.00	335.00
IE141928630112	BARRYROE FRANK	M	08/02/2010	148.00	-6.00	74.00	122.00	-37.00	324.00
IE141368830745	CARBERRY FREEDOM	M	04/03/2010	144.00	-14.00	67.00	135.00	-47.00	313.00
IE151602070352	MISTIC FABIO	M	02/06/2010	138.00	-22.00	78.00	132.00	-19.00	287.00
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IE15151490555	GLEN NORTH FRANK 555	M	14/03/2010	126.00	-9.00	55.00	101.00	23.00	245.00
IE141475450885		M	02/01/2010	124.00	-4.00	54.00	110.00	-32.00	255.00

You can repeat this step as many times as you like for the animals on the list ...

However, this is not all. There are two other sources of information that are now routinely available to all beef cattle breeders. There are also dairy versions of these.

Firstly, there is the **catalogue page** for which there is a **pedigree version** and a commercial female version ...

Presentation Notes - RDS

Lot 1 Ballyville Plus 1 (X)			Breed: Hereford		
IE301104090350		DOB: 24-Feb-2001		Twin to Female Female	
Owner: Joseph Deverell - Ballyville Geashill Co Offaly					
Sire: Aughmaree Rookie (X) (GLCR02129) SBV = € 90 (69%)		Dunrobin Hallmark 10d X Imp Ca	SBV = € 86 (83%)	Dunrobin Blue Jay Et 43b Dunrobin Admiral'S Lass 52x	
		Aughmaree Daisy	SBV = € 67 (17%)	Bp 55c Britisher 1m Imp Can Curraghroe Nessa	
Dam: Ballyville Nellie IEJLQZ0155R SBV = € 73 (43%)		Cill Cormaic Generator	SBV = € 52 (70%)	Sns Generator 28x Imp Can Macclone Mandie	
		Ballyville June	SBV = € 59 (37%)	Drumakeenan Do-A-Lot Ballyville Tina	
€uro-Star Indexes					
% Rank	Star Rating (within breed)	Indexes & Traits	€uro-Value	Data Reliability	Relative Data Reliability Comment
99%	★★★★★	Suckler Beef Value (SBV)	€ 127	36%	High
99%	★★★★★	Weanling Export	€ 43	37%	High
99%	★★★★★	Beef Carcass	€ 43	36%	High
88%	★★★★★	Daughter Fertility	€ 68	0%	Low
99%	★★★★★	Daughter Milk	€ 154	42%	High

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Any pedigree breeder can obtain this page through their Herd Book or directly through logging-on. If you are **buying a pedigree animal** you can expect this information to be available. If it is not available you should ask why. The page comprises five key elements:

1. Animal ID and owner
Click
2. Three Generation Ancestry and SBV for the first two generations
Click
3. €uro-Star indexes

Other Key Traits			
26%	★★	Maternal Calving Diff	8%
96%	★★★★★	Gestation Length	47%
91%	★★★★★	Docility	22%

GROW Linear Score Evaluation (Within-Breed Percentiles)		BLUP Composites (Within Breed)	
Linear scored progeny in evaluation			
Width at withers	Narrow		Wide
Width behind withers	Narrow		Wide
Loin Development	Thin		Thick
Dew hind quarter	Low		High
Thigh width	Narrow		Wide
Height at withers	Small		Tall
Length of back	Short		Long
Length of pelvic	Short		Long
Width at hips	Narrow		Wide
Locomotion	Poor		Good
Breed percentile			

Feet and Leg Descriptions		
Hind leg side view	Straight	Sickled
Hind leg rear view	Toes out	Toes in
Fore leg front view	Toes out	Toes in
Standard deviations from breed average		

Data Reliability		Rank %	
Muscle	108 32%	73%	
Skeletal	122 34%	98%	
Function	104 8%	68%	
Comments			

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This catalogue is the result of a major collaborative effort involving Herd Books and ICBF.

5. The details of each calving and the fate of the resulting calf - seven calvings here (last was a set of twins)

Similarly high quality, comprehensive information is available for dairy cattle.

Dairy Cow Report

Animal Details							Details & EBI Indexes																						
Jumbo Tag	2	IE141407880268					Sire	GMI (€ 101)																					
Name	GERAGHTOWN SALLY 20 VG88						Dam	DBL972259 (€ 162)																					
DOB	17-Feb-01 9y 9m						Dam's Sire	0100542064																					
Breed	HO 56.3% FR 43.8%						EBI	Milk	Fert	Calv	Beef	Mainten	Health																
							€ 214	€ 103	€ 95	€ 20	-€ 16	€ 10	€ 2																
EBI Rank	1						Milk Kg	Fat Kg	Prot Kg	Fat %	Prot %	Calv. Int.	Survival																
In Herd	Born In herd																												
Status	Milking																												
Due Calve	20-MAY-11 MMU						42	22.5	13.5	0.4	0.23	-5 days	2.9%																
Exp EBI € 208																													
Calving & Fertility							Milk Production																						
Lact	Calved	Calf Tag	Sex	On Farm	Num Calv	Serve Int	Milk kg	Fat kg	Prot kg	Fat %	Prot %	F+P kg	SCC	Days															
1	12-Mar-03	10389	F	Y	1		4612	227	177	4.92	3.83	404	38	248															
2	11-Feb-04	10402	M	N	2	337	5746	264	230	4.6	4.01	495	57	265															
3	22-Jan-05	40446	F	Y	-	346	6397	333	251	5.21	3.93	585	95	279															
4	04-Feb-06	50505	F	Y	-	378	6989	315	276	4.51	3.95	591	181	284															
5	28-Apr-07	20584	M	N	-	446	5997	298	245	4.97	4.08	543	52	211															
6	14-Apr-08	70647	F	Y	1	354	6367	303	260	4.76	4.09	564	44	317															
7	05-Jun-09	10740	M	N	1	417	4727	209	181	4.43	3.83	390	309	210															
8	11-May-10	30791	M	N	3	340	3828	165	150	4.31	3.93	316	64	177															
Avg (Comp)							374	5834	278	231	4.77	3.96	510	111	259														
Lifetime Production							44663	2114	1770	4.73	3.96	3688	195																

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Here is the dairy cow report for today's dairy champion of champions.

What you have seen here today is the result of a partnership involving Herd Books, AI Companies, Recording Organisations, DAFF, Teagasc, Farmers and ICBF. Few if any other countries in the world have such high quality information for cattle breeding – dairy and beef. Your challenge is to make good use of it to breed the future champion of champions – judged on their ability to improve the profitability of cattle farming in Ireland.

Before I finish I want to cover one other subject, which will have a major impact on your ability to breed more profitable cattle.

Genomics

Dairy	Beef
- DNA test at birth gives as much information for EBI traits as 15-20 progeny. 40% of AI matings 2010 to genomic bulls. - Accuracy improving. - Cost of testing declining. - A revolution in breeding. - Ireland is a leader in the application of genomics.	- Irish training research has commenced. - Need DNA from more animals with accurate evaluations. - Seeking international collaborators. - First results expected in 2011.

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Genomics is a new tool that first impacted on cattle breeding in Ireland in the spring of 2008. In the two years since then it has already become a key tool for dairy cattle breeders. The benefit of genomics is that a DNA test, now costing less than €60, on a new born calf, gives as much information as 15 to 20 progeny of that animal. With this information major breeding decisions can be made much earlier in the life of the animal. For example in spring 2010 40% of all AI inseminations of dairy cattle in Ireland were made to bulls selected on the basis of this genomic test.

The accuracy of genomic testing is improving with larger training populations, better methods and refinements based on experience. This is leading to a revolution in dairy cattle breeding – costs are reduced and genetic gains increased. Ireland is one of the leaders in using this technology.

Click

The use of genomics in beef cattle breeding is not as advanced but research is now well underway. While we need DNA from more animals that are accurately proven, we already have enough to get started. The first results are expected in 2011.

What does this means for the breeders of the future champion of champions – for profitability – you will be able to get an earlier assessment in the animals life – low index bulls can go straight to the factory and high index bulls can be used by farmers with

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greater confidence.

These are exciting times for Irish cattle breeders.

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Summary

- Irish cattle farmers want to breed more profitable cattle.
- Ireland now has a world-class system for finding cattle with the greatest genetic potential to increase profits.
- Genomics is fundamentally altering the way we breed cattle. The revolution is well underway for dairy and we expect it to start in 2011 for beef.

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In summary:

- Irish cattle farmers want to breed more profitable cattle.
- Ireland now has a world-class system for finding cattle with the greatest genetic potential to increase profits.
- Genomics is fundamentally altering the way we breed cattle. The revolution is well underway for dairy and we expect it to start in 2011 for beef.

Thank you and once again congratulations to today winners. I look forward to seeing you back here in the future with even more profitable cattle.

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