



## Upcoming Webinars

**Wednesday, 27 May**

**Reducing Lameness in Sheep**

**Wednesday, 10 June**

**Incorporating White Clover on Cattle and Sheep farms**

[www.teagasc.ie/LetsTalkCattleSheep](http://www.teagasc.ie/LetsTalkCattleSheep)



# Improving Breeding Performance

Martina Harrington  
Teagasc

Beef Webinar  
13 May 2020



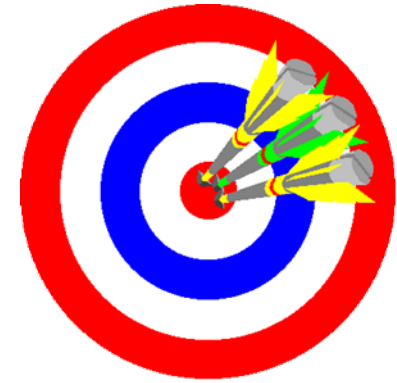
AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY

# Meeting your breeding targets

- What are the targets?
- Benefits of meeting the targets?
- How to achieve these targets?

# What are the targets

- 0.95 calf/cow/year
- 365 Day Calving Interval
- 10 – 12 week calving spread
- Less than 2.5% mortality at birth
- Less than 5% mortality at 28 Days
- 60% of cows calved in first month
- 80% of cows calved in first two months



# What are the targets



- Calve heifers at 2 years of age
- Breed replacements to high maternal bulls
- Match calving dates to grass availability



# Why – Improve your Breeding Performance

**Increase output**

**Reduce Costs**

**Increase profitability**

**Reduce Labour**

# Compact Calving

Even bunch of stock – easier management

- Calves can be dehorned, wormed, vaccinated and weaned in bigger groups on set dates
- Less risk of disease
- Fewer grazing groups
- Uniform bunch of cattle similar sale weight and can be sold in larger groups
- Heavier more fertile heifers at bulling
- Calves born earlier – heavier at weaning



# Why – 80% of cows calved in first two months

Date	Age @ Weaning (Days)	Weight @ Weaning	Effect of calving spread on Weaning Weight
1 <sup>st</sup> Feb – 22 <sup>nd</sup> Feb	245	310kg	Avg Weaning Weight 1st 6 weeks 299Kg
22 <sup>nd</sup> Feb – 15 <sup>th</sup> Mar	224	287kg	
15 <sup>th</sup> Mar – 5 <sup>th</sup> April	203	263kg	1st 9 weeks 290Kg
5 <sup>th</sup> April – 26 <sup>th</sup> April	182	240kg	1st 12 weeks 277Kg
26 <sup>th</sup> April – 17 <sup>th</sup> May	161	217kg	1st 15 weeks 265Kg

ADG 1.1kgs  
 Birth weight 45kgs  
 Weaned in October

## Need a PLAN



# Plan

- Start Date

- Start calving 7<sup>th</sup> Feb start breeding 1<sup>st</sup> May

Breeding Date	Calving Due Date
1 <sup>st</sup> April	8 <sup>th</sup> January
1 <sup>st</sup> May	7 <sup>th</sup> February
1 <sup>st</sup> June	10 <sup>th</sup> March
1 <sup>st</sup> July	9 <sup>th</sup> April
1 <sup>st</sup> August	10 <sup>th</sup> May
1 <sup>st</sup> September	10 <sup>th</sup> June

# Plan

- End date
  - 10-12 weeks after start

**Example Plan:**

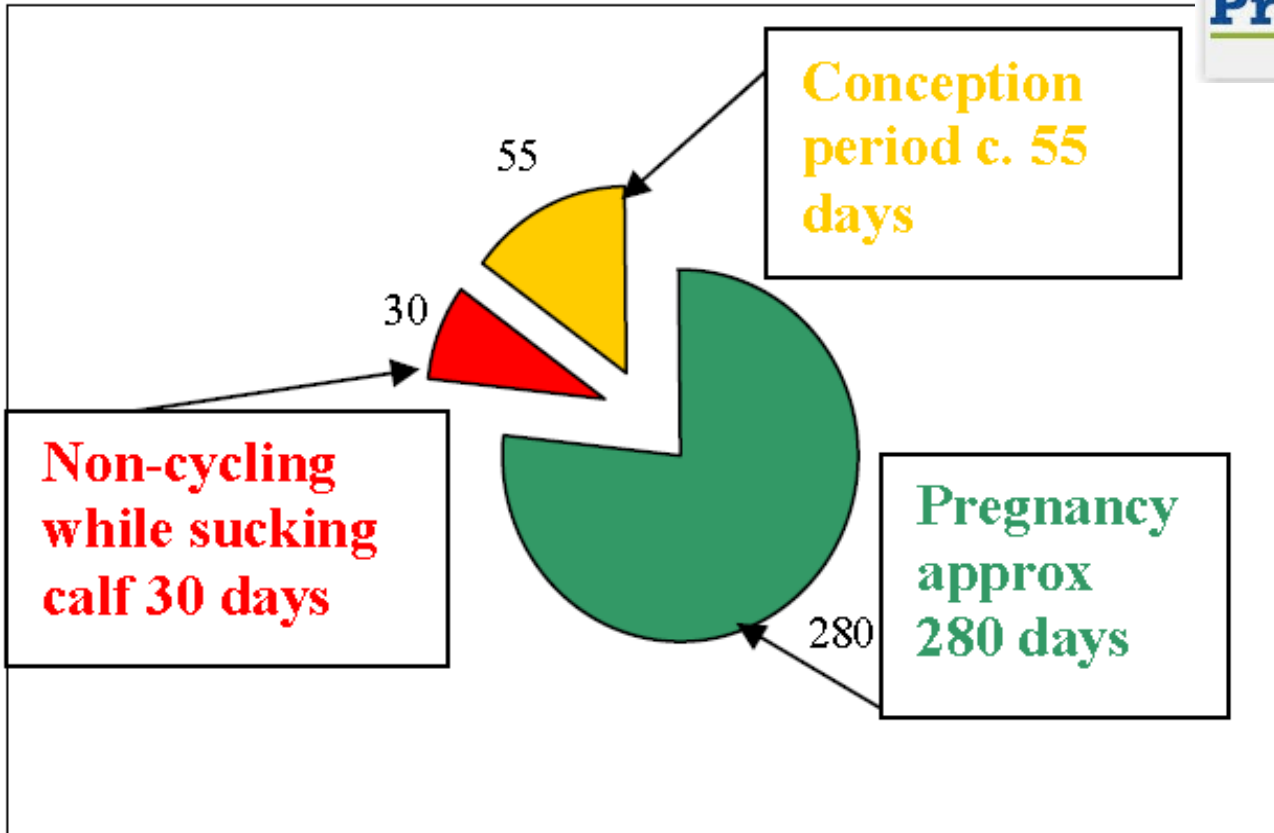
<b>Year 1 August 1st 2020 Take out Bull</b>	<b>No calves after 11th May 2021</b>
<b>Year 2 July 15th 2021 Take out Bull</b>	<b>No May born calves 2022</b>
<b>Year 3 July 1st 2022 Take out Bull</b>	<b>10th April - 2023</b>
<b>Year 4 June 15th 2023 Take out Bull</b>	<b>24th March - 2024</b>

# Plan

- Plan for late calving cows
  - Cull – Beware of BDGP



Breeding cycle of a cow/heifer



# Get the cow/heifer back cycling

- Dependent on:
  - Body condition score of cow – aim 2.5 @ mating
  - Plane of nutrition – should be increasing
  - Difficult calving's increase anoestrous period
  - Health status – BVD, Lepto, salmonella etc.
  - Heifer Effect, 10-15 days longer than cows to come into heat. Bull at start of breeding season
  - Bond between cow and calf

# Plan

- Restricted Suckling
  - Remove calf from cow after 30 days
  - Suckle twice daily for 2-3 weeks
  - 80% cows will show heat by day 50
- Hormonal intervention – Synchronisation



# Plan

- Plan for replacements
  - Keep your own – heavy enough for bulling
    - » 60% mature weight at bulling
    - » Cows 700kg – 420kg @ 15 months (A.D.G 0.8kg)
      - 650kg – 390kgs (0.75kg)
      - 800Kg – 480kgs (0.95kg)
  - Buy in heifers
  - Buy in in-calf cows



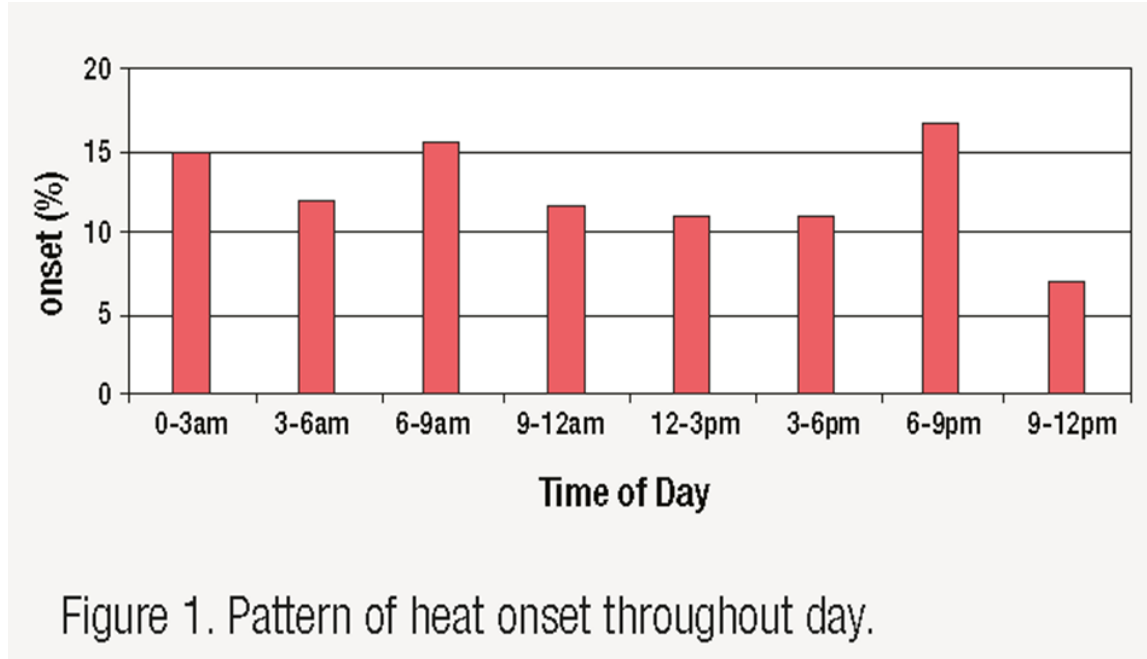
# Bull

- Ensure he is fit and exercised
- Check his feet
- Ensure he is following and mating cows
- A mature bull can handle up to 40 cows
- Young bull much less, rule of thumb, one cow per month of age
- To reduce pressure mix early and late calving cows
- Rotate the bull



# Observation & Record keeping

- Check your cows several times a day



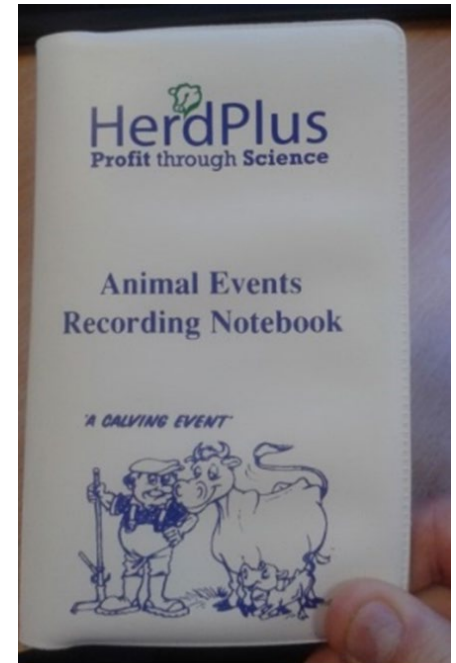
Standing heat  
approx. 8-10hrs

**• BE VIGILANT  
& KEEP RECORDS**



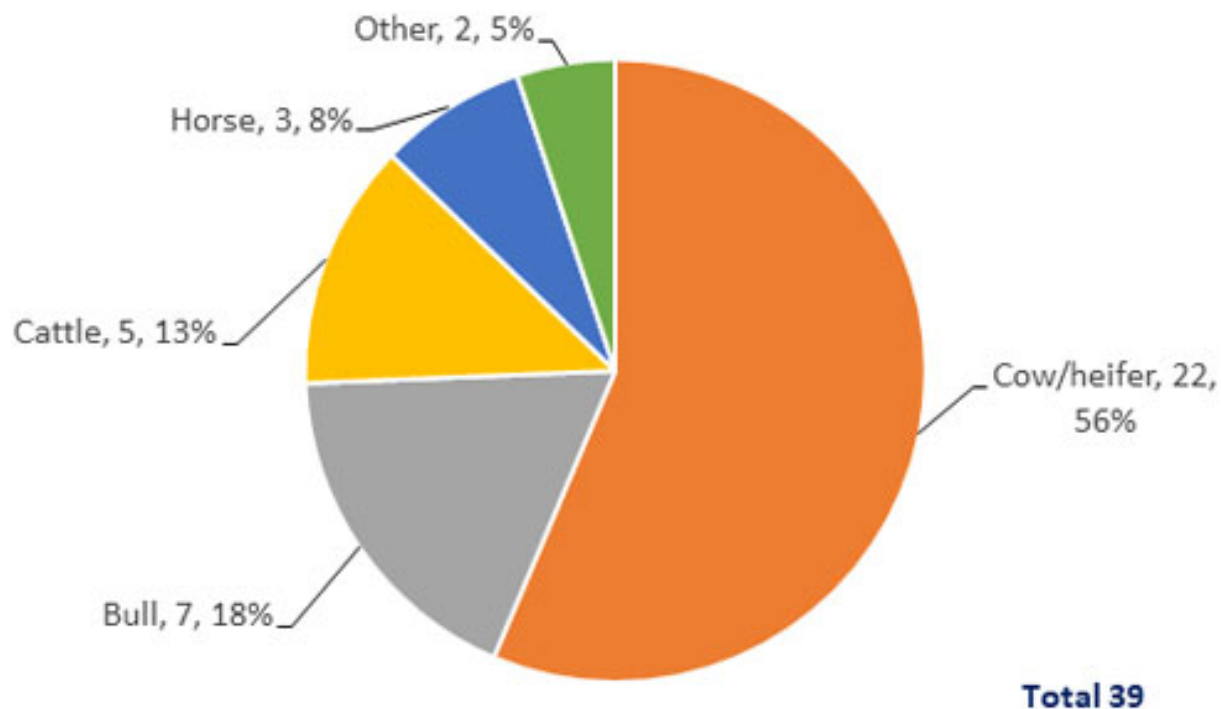
# Observation & Record keeping

- Watch cows first bulled – indicator of an issue
  - Don't wait step in
- Watch for cows not bulling –
  - Get them checked
  - Intervene to compact calving
- Can use aids such as tail paint, scratch card



# Protect Yourself

## Deaths due to livestock 2010-2019 (18% of all Fatalities)



# AI

- Obvious advantages
- Heat detection critical
- Standing heat only 8-10 hours

## Detection Aids

- Vasectomised bulls with chin-ball
- Tail paint
- Scratch cards
- Heat detection collars



[www.teagasc.ie/animals/beef/publications/](http://www.teagasc.ie/animals/beef/publications/)

Herd Owner:  
Herd Number:  
Print Date: 11/05/2020  
Page: 1(3)

(a). Summary Data – Report is based on beef cows that calved between 01/07/2019 and 30/06/2020 (Embryo births excluded)

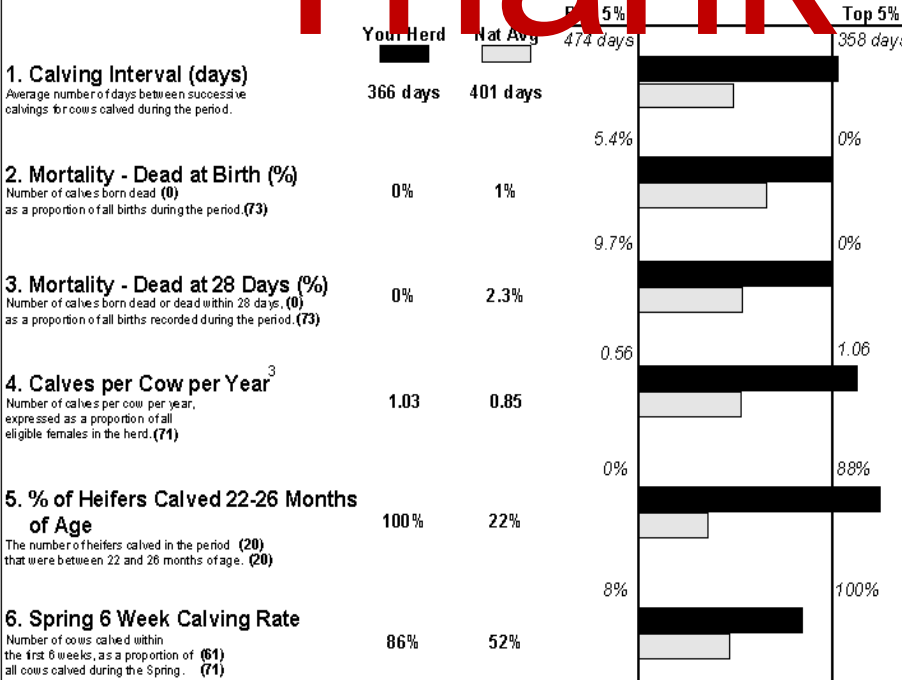
**Spring Calving Dates**

	Start Calving	Median Calving <sup>1</sup>	Last Calving	Calving Period
All	27/01/2020	15/02/2020	24/03/2020	8 weeks + 1 days
Cows	27/01/2020	16/02/2020	24/03/2020	8 weeks + 1 days
Heifers	28/01/2020	06/02/2020	19/03/2020	7 weeks + 2 days

Avg Age Calving (Herd) 4y 4m  
Avg Age Calving (Cows) 5y 3m  
Avg Age Calving (Heifers) 1y 11m

	All			Heifers			Eligible Females <sup>2</sup> 71
	Total	Male	Female	Total	Male	Female	
Total Calves born	73	37	36	21	9	12	Total Beef Calvings 71
Calves Live at Birth	73	37	36	21	9	12	Total Heifer Calvings 20
Calves Dead at Birth	0	0	0	0	0	0	Calves - Live at 28 days 73
							Cows not calved 0

(b). Top 6 Key Performance Indicators (KPIs)



Herd Owner:  
Herd Number:  
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Page: 1(3)

(a). Summary Data – Report is based on beef cows that calved between 01/07/2019 and 30/06/2020 (Embryo births excluded)

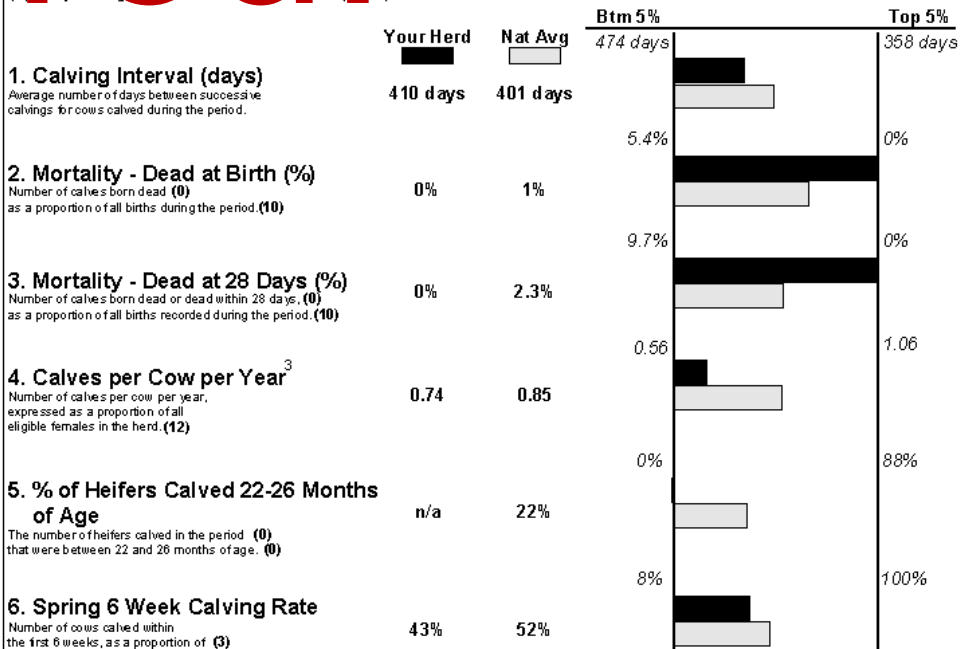
**Spring Calving Dates**

	Start Calving	Median Calving <sup>1</sup>	Last Calving	Calving Period
All	19/02/2020	12/04/2020	24/04/2020	9 weeks + 2 days
Cows	19/02/2020	12/04/2020	24/04/2020	9 weeks + 2 days
Heifers	n/a	n/a	n/a	n/a

Avg Age Calving (Herd) 7y 5m  
Avg Age Calving (Cows) 7y 5m  
Avg Age Calving (Heifers) n/a

	All			Heifers			Eligible Females <sup>2</sup> 12
	Total	Male	Female	Total	Male	Female	
Total Calves born	10	7	3	0	0	0	Total Beef Calvings 10
Calves Live at Birth	10	7	3	0	0	0	Total Heifer Calvings 0
Calves Dead at Birth	0	0	0	0	0	0	Calves - Live at 28 days 10
							Cows not calved 2

(b). Top 6 Key Performance Indicators (KPIs)



# Terminal

Star Rating (within Charolais breed)	Economic Indexes	Purpose	Euro value	Index reliability	Star Rating (across all beef breeds)
★★★★☆	<a href="#">Replacement</a> (per daughter lactation)	To breed future cows for the suckler herd	€61	82% (V High)	★★★★☆
★★★★★	<a href="#">Terminal</a>	To breed beef animals from the suckler herd that are destined for slaughter	€173	89% (V High)	★★★★★
★★★★☆	<a href="#">Dairy Beef</a>	To breed beef animals from the dairy herd that are destined for slaughter	€18	68% (High)	★★★★☆

Calving Difficulty (births requiring considerable assistance; % 3 & 4)		
When Mated With:	Value	Reliability
<a href="#">Beef Heifers</a> Breed avg: 10.97%, All breeds avg: 8.33%	13.6%	76% (High)
<a href="#">Beef Cows</a> Breed avg: 5.73%, All breeds avg: 3.87%	- ...	99%

Star Rating (within Charolais breed)	Key profit traits	Index value
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Expected progeny performance		
★★★★★	<a href="#">Docility (1-5 scale)</a> Breed avg: 0.04, All breeds avg: 0.01	0.16 scale
★★★★★	<a href="#">Carcass weight (kg)</a> Breed avg: 33.48kg, All breeds avg: 16.39kg	46.8kg
★★★★★	<a href="#">Carcass conformation (1-15 scale)</a> Breed avg: 1.88, All breeds avg: 1.40	2.54 scale

Expected daughter breeding performance		
	<a href="#">Daughter calving difficulty (% 3 &amp; 4)</a> Breed avg: 4.67%, All breeds avg: 5.40%	3.27%
★☆☆☆☆	<a href="#">Daughter milk (kg)</a> Breed avg: -3.77kg, All breeds avg: 2.29kg	-7.10kg
★☆☆☆☆	<a href="#">Daughter calving interval (days)</a> Breed avg: -1.25 days, All breeds avg: -0.76 days	1.85days

	Old	Dairy Cow	Beef Cow	Dairy Heifer	Beef Heifer
0.1% to 2.4%	2.7	2	6.7	5	
2.5% to 3.4%	3.5	2.6	8	6.4	
3.5% to 4.4%	4.7	3.2	10.1	7.7	
4.5% to 6.0%	6.7	4.2	13.2	9.5	
6.1% to 7.3%	8.5	5.5	15.9	11.3	
>=7.4%	9.8	7.9	18.1	14.6	

	59% (Average)	★★★★☆
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# Replacement

Star Rating (within Simmental breed)	Economic Indexes	Purpose	€uro value	Index reliability	Star Rating (across all beef breeds)
★★★★★	<a href="#">Replacement</a> (per daughter lactation)	To breed future cows for the suckler herd	€213	87% (V High)	★★★★★
★★★★★	<a href="#">Terminal</a>	To breed beef animals from the suckler herd that are destined for slaughter	€100	96% (V High)	★★★★☆
★★★★★	<a href="#">Dairy Beef</a>	To breed beef animals from the dairy herd that are destined for slaughter	€52	92% (V High)	★★★★☆

Calving Difficulty (births requiring considerable assistance; % 3 & 4)		
When Mated With:	Value	Reliability
<a href="#">Beef Heifers</a> Breed avg: 9.19%, All breeds avg: 8.33%	9.1%	96% (V High)
<a href="#">Beef Cows</a> Breed avg: 3.64%, All breeds avg: 3.87%	3.6%	99% (V High)

Star Rating (within Simmental breed)	Key profit traits	Index value	Trait reliability	Star Rating (across all beef breeds)
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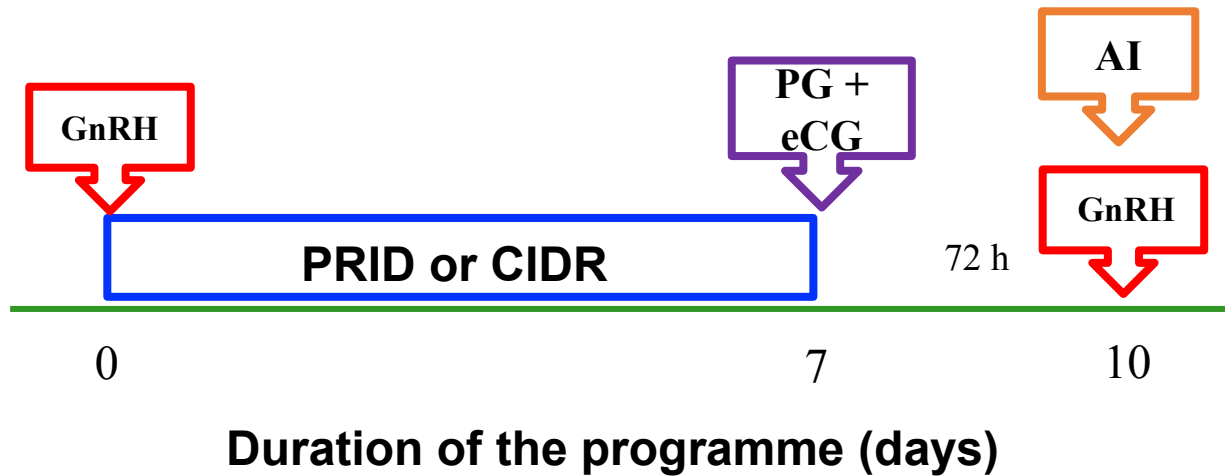
## Expected progeny performance

★★★★☆	<a href="#">Docility (1-5 scale)</a> Breed avg: 0.05, All breeds avg: 0.01	0.09 scale	99% (V High)	★★★★★
★★★★☆	<a href="#">Carcass weight (kg)</a> Breed avg: 21.85kg, All breeds avg: 16.39kg	25.5kg	99% (V High)	★★★★★
★★★★★	<a href="#">Carcass conformation (1-15 scale)</a> Breed avg: 1.37, All breeds avg: 1.40	1.66 scale	99% (V High)	★★★★☆

## Expected daughter breeding performance

	<a href="#">Daughter calving difficulty (% 3 &amp; 4)</a> Breed avg: 5.45%, All breeds avg: 5.40%	5.36%	82% (V High)	
★☆☆☆☆	<a href="#">Daughter milk (kg)</a> Breed avg: 8.18kg, All breeds avg: 2.29kg	4.80kg	93% (V High)	★★★★☆
★★★★★	<a href="#">Daughter calving interval (days)</a> Breed avg: 0.13 days, All breeds avg: -0.76 days	-7.08days	62% (High)	★★★★★

**Figure 1.** Recommended TAI protocol for beef cows



GnRH Gonadotropin releasing hormone (e.g. Ovarelin, Receptal, Acegon)  
PG Prostaglandin (e.g. Enzaprost, Estrumate, Lutalyse)  
eCG PMSG



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