MUNSTER BOVINE

Collectively Improving Farm Life

Should you milk every cow?

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8th January 2020

Dairy Herdowner's Needs

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Work life balance

Profit

Health & Wellbeing

Protection

Reduced time per cow

Lean

Dairy Industry Needs

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Herd Owners

Profitability
Work Life Balance
Health
Attractive

Environment

GHGE & Carbon
Production
Management
Water Quality & Usage

Reduced Disease
Reduced SCC
Increased Calf Health

AMR, Welfare & Disease Mitigation

Product Specification & Reassurance/Traceability

Disease control program
Mineral & Vitamin management
AMR

Ease of management
Grass to Kgs solids
Energy Efficiency
Resilient
Profitable

Simple Grass Based Systems

Milk Quality
Increased % Fat & Protein
Decrease SCC

Efficiency & Processability

Consumer Needs

- Social licence
- Water Quality
- Nutrient Management
- Carbon Footprint
- Antimicrobial Resistance
- Animal Welfare
- Biodiversity

Ireland is ranked 3rd in the world on the UN human development Index

2017 Profit Monitor Analysis – 1568 Farms

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It takes 250 kg MS to pay for the cows upkeep in LOW COST herds

	Top 25%	Average
Gross Output/Cow	€2,342 **489Kgs MS**	€2,128 **445Kgs MS**
Total Variable Costs/Cow	€641	€674
Total Fixed Costs/Cow	€473	€514
Total Costs/Cow	€1,114 **233Kgs MS**	€1,188 **248Kgs MS**
Net Profit/Cow	€1,227 **256Kgs MS**	€941 **197kgs MS**

Analysis for 4,500 Spring Milk Herds in 2018

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If its costing €1,188 to keep the average cow in a LOW COST HERD

How much will 100 cows leave???

	TOP 20%	TOP 40%	AVERAGE 20%	BOTTOM 40%	BOTTOM 20%
Fat & Protein (Kg/cow)	513	445	402	355	264
Milk value (€)	€2,452	€2,127	€1,921	€1,697	€1,262
Margin from milking 100 cows	€126,400	€93,900	€73,300	€50,900	€7,400

Improving Milk Solids Yield

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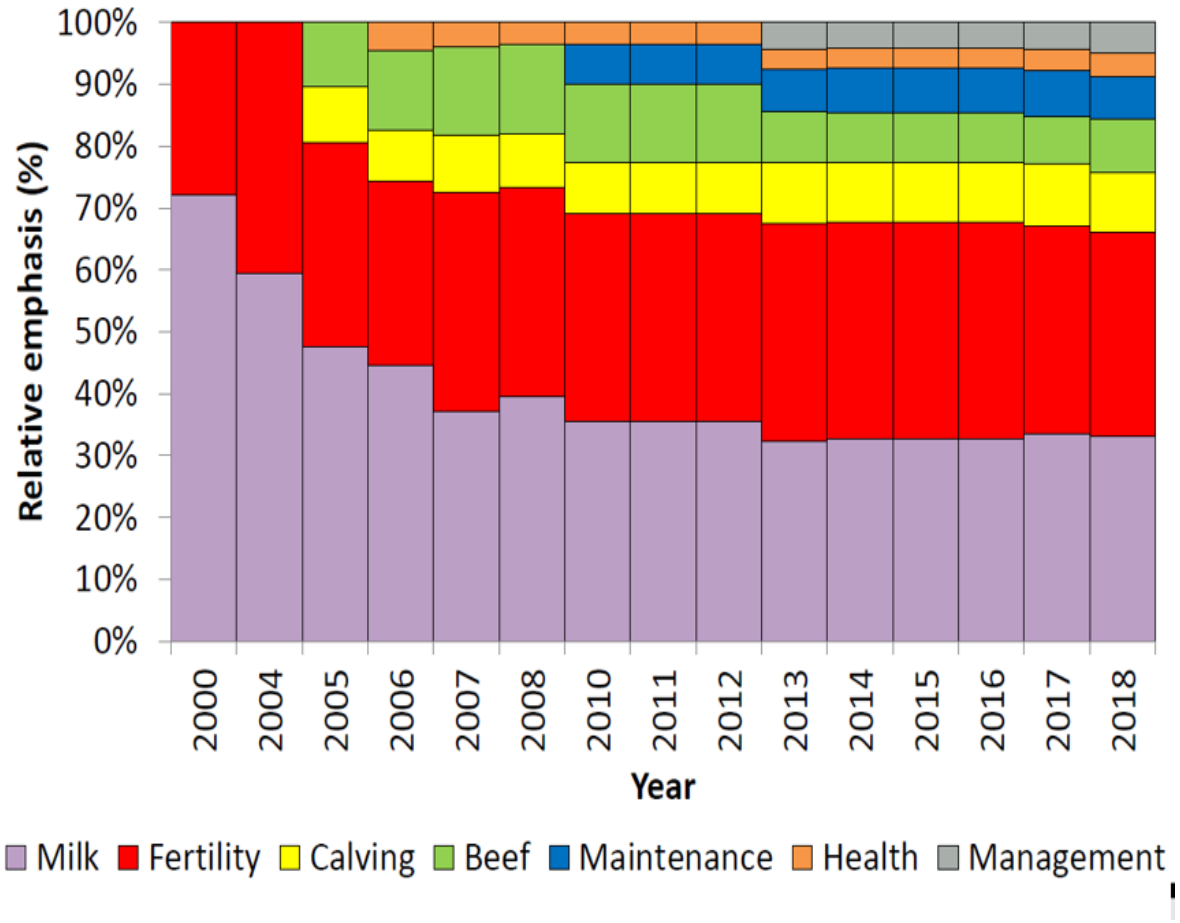
Through Culling

- Genetics/EBI
- SCC
- Poor Performers
- Johnes
- Neospora?

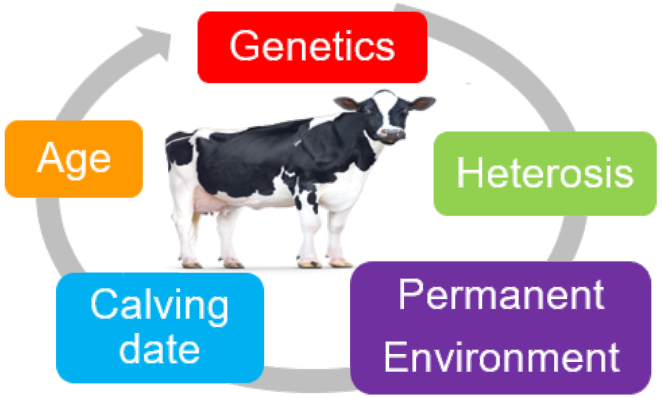
Through Managing

- Herd maturity
- Days in milk
- SCC
- Replacement heifers
- Disease
- Parasites

Culling Selection Tools - EBI & C.O.W.



C.O.W. is a decision support tool that ranks dairy females on expected profit for the remainder of their lifetime



Should you milk every cow?

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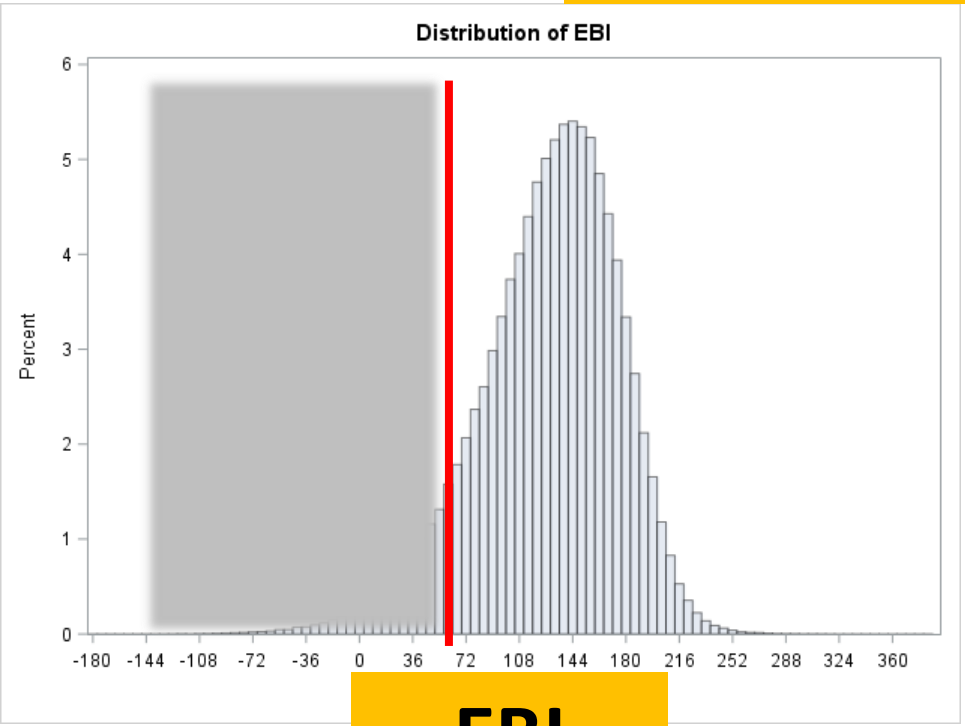
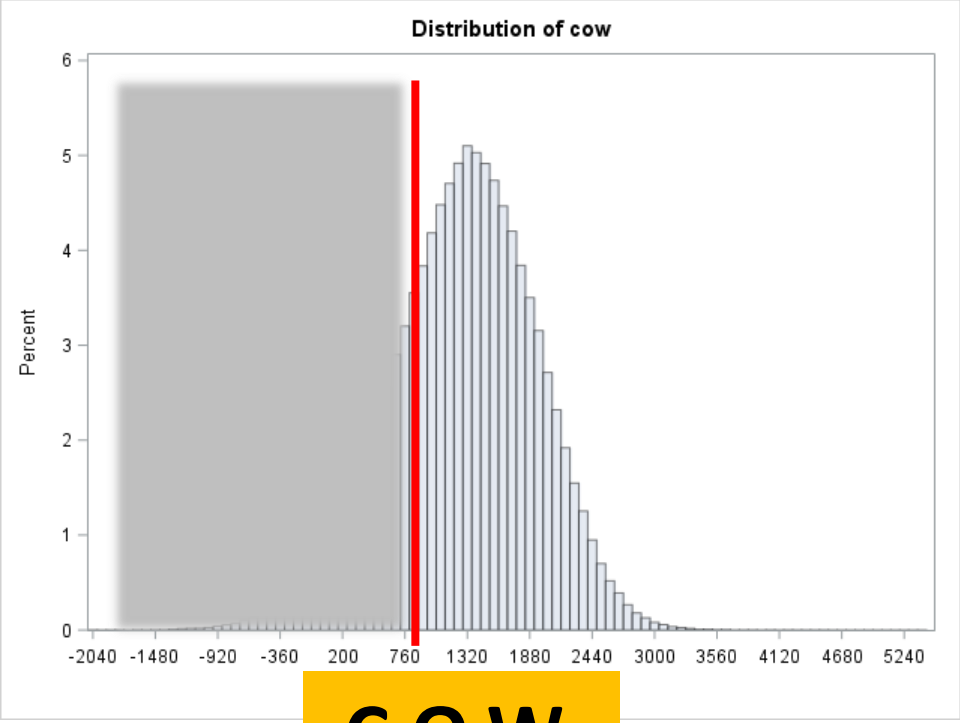
Variable	N	Mean	Std Dev	Minimum	Maximum
EBI	371,331	127	48	-183	386
C.O.W.	371,331	1,282	654	-2,076	5,417

Where do you draw the line?

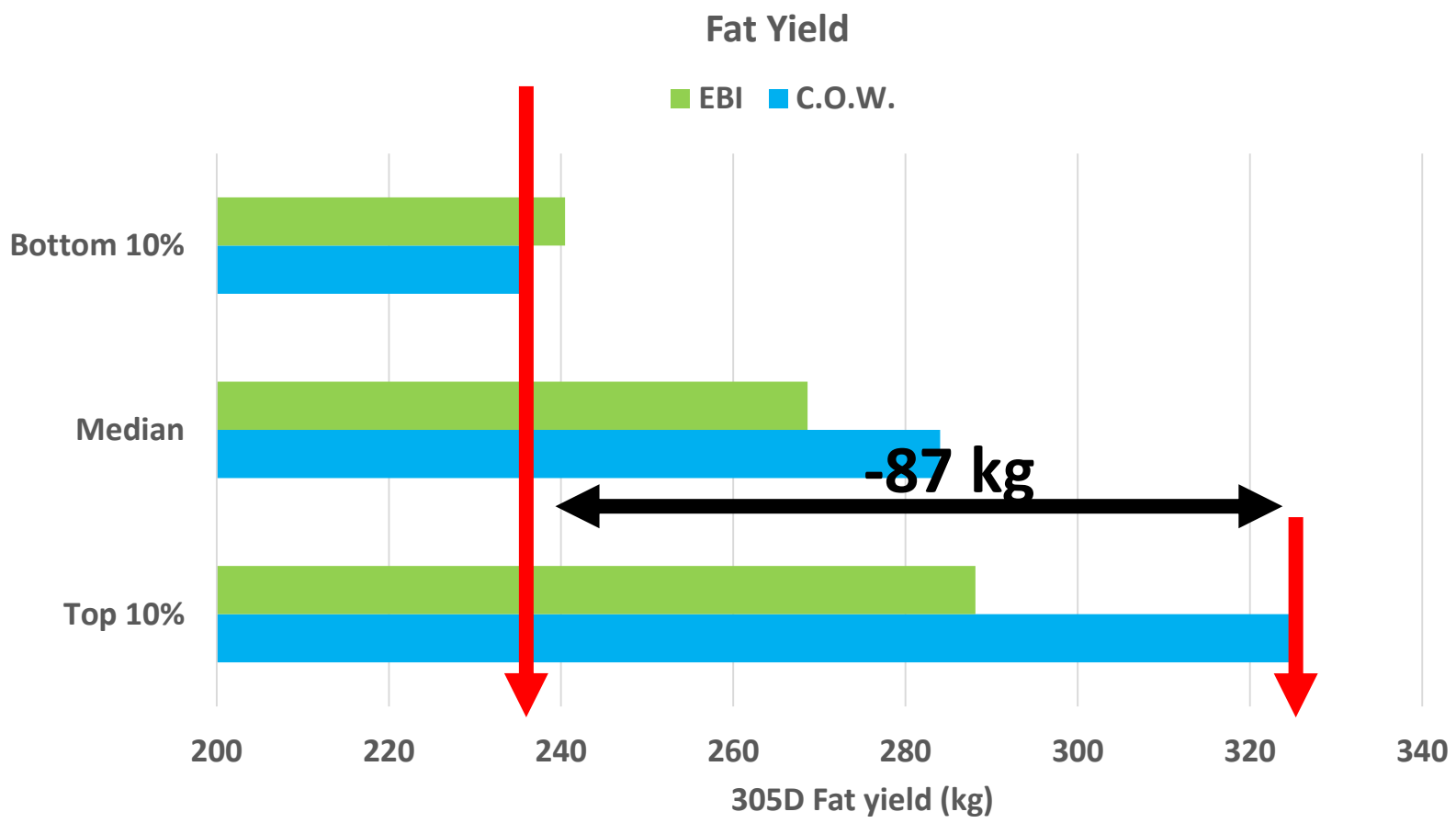


EBI



C.O.W.

Analysis on herds using C.O.W. & EBI



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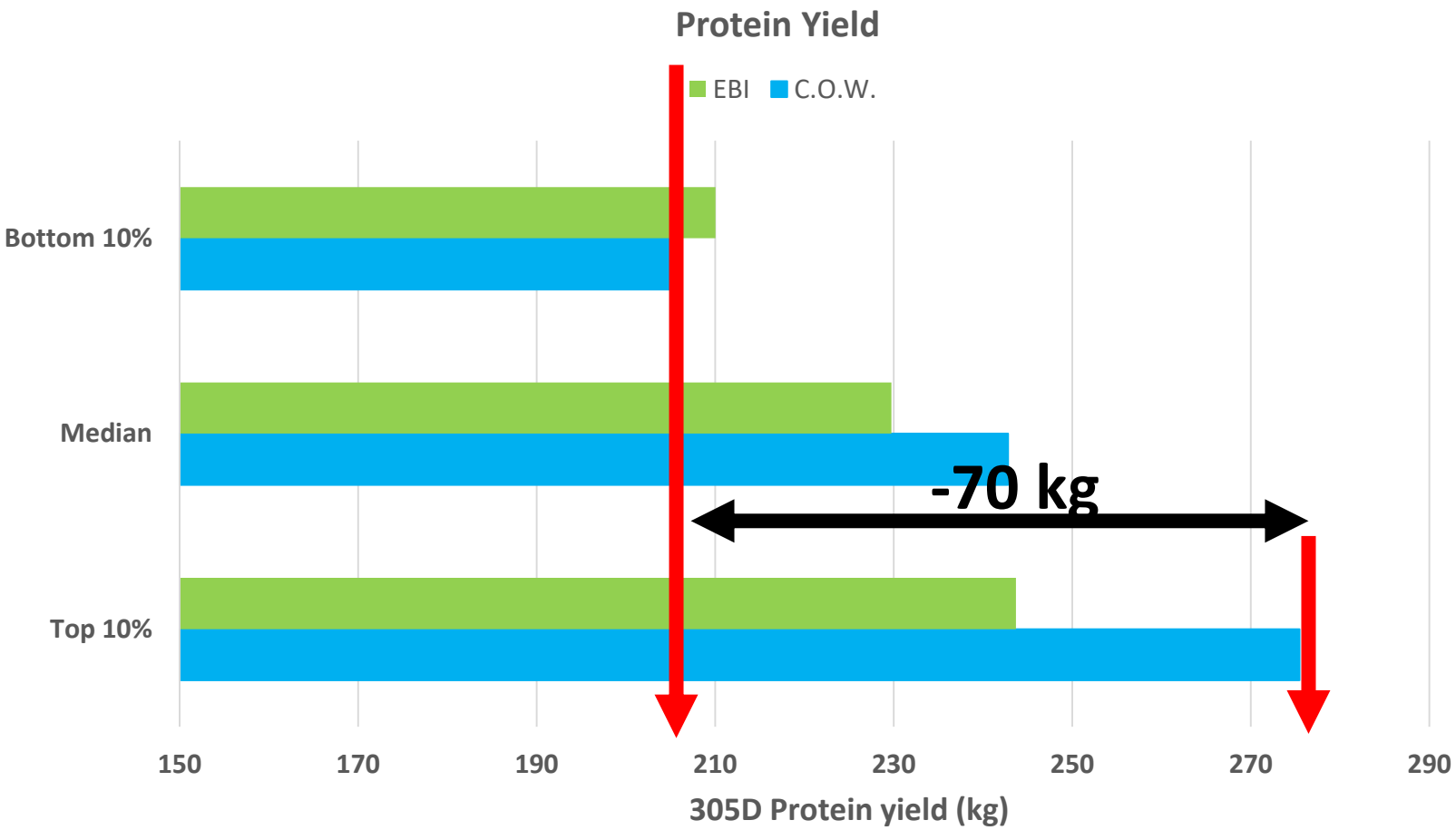

Analysis on herds using C.O.W. & EBI

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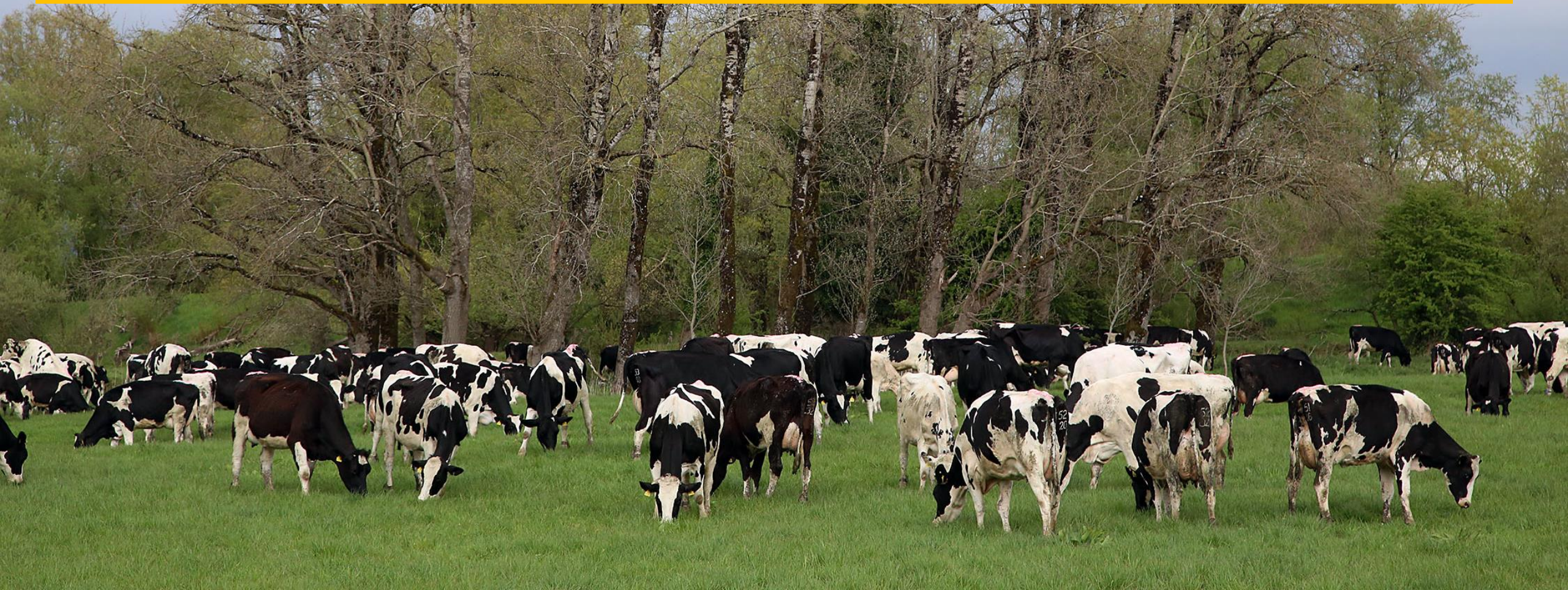
- Should I milk every cow?
- If all my cows were like the Top 10%?

Difference in milk sales €69,854

Ranked by C.O.W.	Milk (€)	Fat (€)	Protein (€)	Milk value (€)	Difference top and bottom 10%
Top 10%	-296	1,180	1,703	**2,587**	
Median	-268	1,033	1,501	**2,266**	**€699**
Bottom 10%	-236	858	1,267	**1,889**	

Chronically SCC & Johnes Infected cows – Need to be culled

Or clean cows will become infected



SCC Analysis of 1,235 milk recorded herds in dry period 2018/2019

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Heifers New Infection Rate		Cows New Infection Rate		Cows Cure rate over the dry period	
Top 20%	0%	**Top 20%**	0% - 5%	**Top 20%**	100%
21-40%	0% - 8%	**21-40%**	5% - 9%	**21-40%**	95% - 81%
41-60%	8% - 14%	**41-60%**	9% - 13%	**41-60%**	80% - 71%
61-80%	15% - 25%	**61-80%**	13% - 18%	**61-80%**	71% - 57%
81-100%	25% - 100%	**81-100%**	19% - 100%	**81-100%**	57% to 14%
Median 12%		**Median 10%**		**Median 75%**	

High SCC Cows – Issues?

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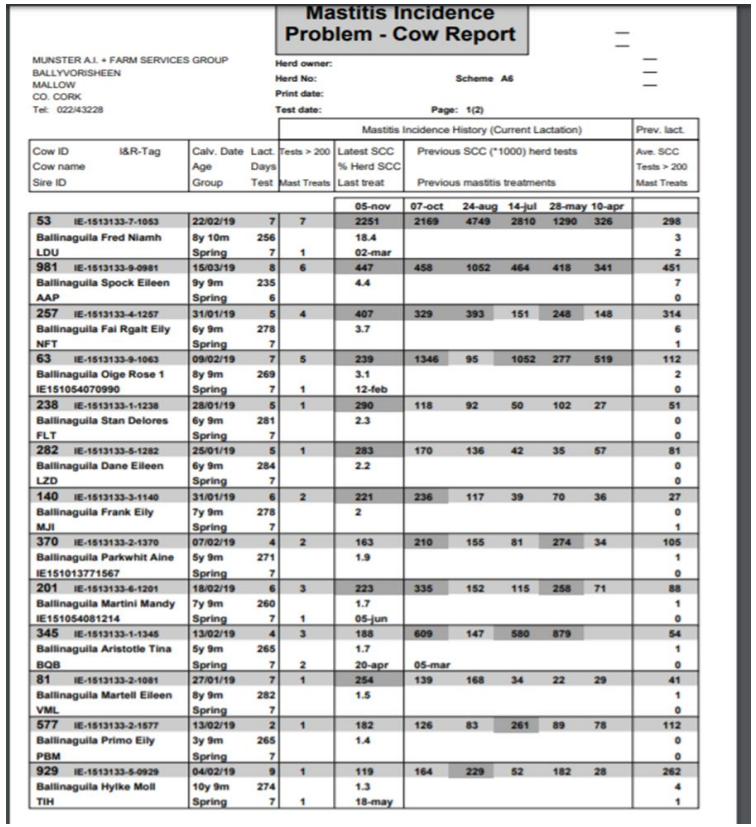
- **Infect** other clean cows - first calved heifers
- **AMR** – Increases antibiotic usage- calves ingesting waste milk
- **AMR** – Not worthy of treatment
- **Profitability** – Lower Production
- **Peace** of Mind – Antibiotics in bulk tank
- **Time** – Identification/ Treatment/Milk withdrawal
- **Interrupted** - milking routine
- **Labour-** Complications
- Work life **balance** – fear of contracting in a milker

SCC Cull or Not ?
Early Milk Recording Post Calving Crucial

- Cull if two tests >500,000 SCC and no cure in the dry period
- Treat recently infected promptly - Maximize Outcomes

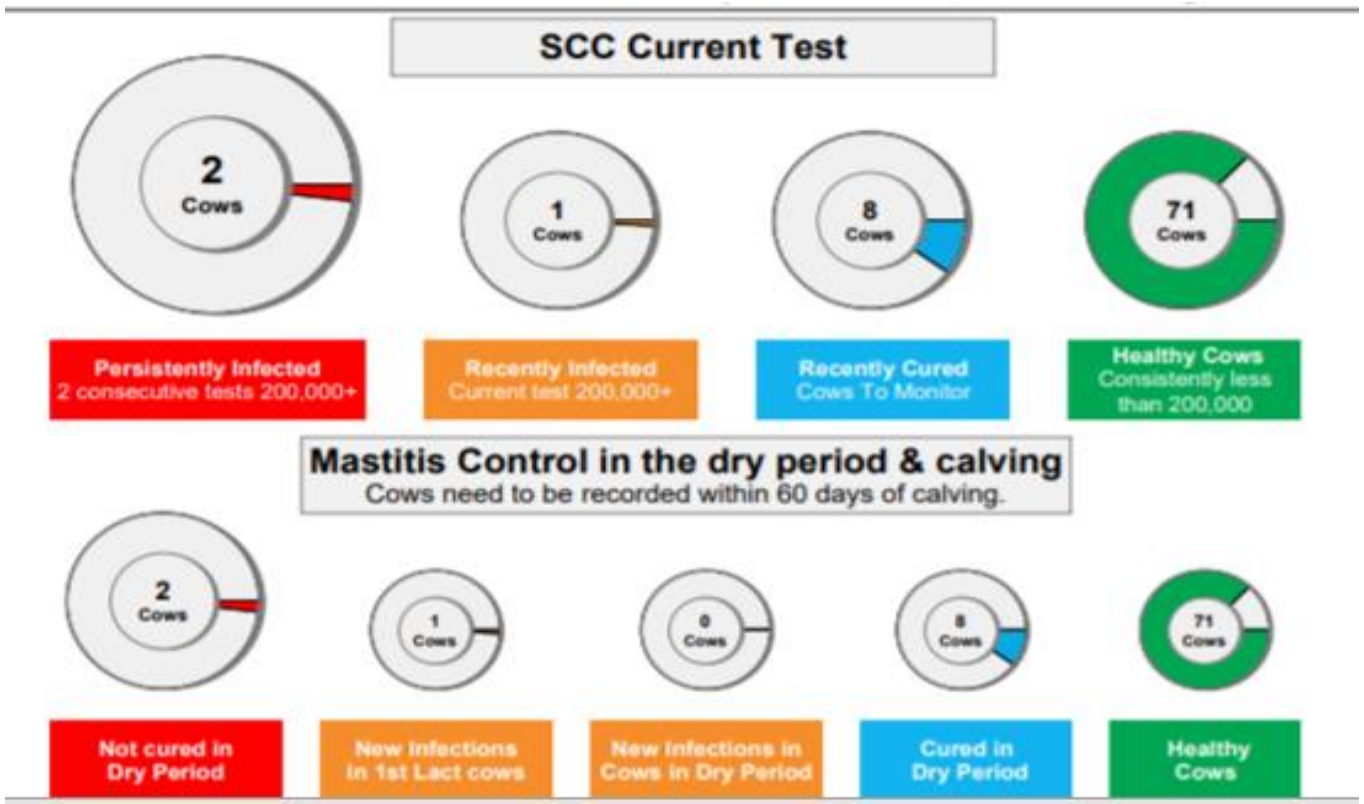


Mastitis Incidence Problem - Cow Report

MUNSTER A.I. + FARM SERVICES GROUP
BALLYVORISHEEN
MALLOW
CO. CORK
Tel: 022/43228

Herd owner:
Herd No: Scheme A6
Print date:
Test date: Page: 1(2)

Cow ID / Cow name / Sire ID	I&R-Tag	Calv. Date / Age / Group	Lact. / Days / Test	Mastitis Incidence History (Current Lactation): Tests > 200 / Mast Treats	Latest SCC / % Herd SCC / Last treat	Previous SCC (*1000) herd tests / Previous mastitis treatments					Prev. lact.: Ave. SCC / Tests > 200 / Mast Treats
					05-nov	07-oct	24-aug	14-jul	28-may	10-apr	
53	IE-1513133-7-1053	22/02/19	7	7	2251	2169	4749	2810	1290	326	298
Ballinaguila Fred Niamh		8y 10m	256		18.4						3
LDU		Spring	7	1	02-mar						2
981	IE-1513133-9-0981	15/03/19	8	6	447	458	1052	464	418	341	451
Ballinaguila Spock Eileen		9y 9m	235		4.4						7
AAP		Spring	6								0
257	IE-1513133-4-1257	31/01/19	5	4	407	329	393	151	248	148	314
Ballinaguila Fai Rgalt Eily		6y 9m	278		3.7						6
NFT		Spring	7								1
63	IE-1513133-9-1063	09/02/19	7	5	239	1346	95	1052	277	519	112
Ballinaguila Oige Rose 1		8y 9m	269		3.1						2
IE151054070990		Spring	7	1	12-feb						0
238	IE-1513133-1-1238	28/01/19	5	1	290	118	92	50	102	27	51
Ballinaguila Stan Delores		6y 9m	281		2.3						0
FLT		Spring	7								0
282	IE-1513133-5-1282	25/01/19	5	1	283	170	136	42	35	57	81
Ballinaguila Dane Eileen		6y 9m	284		2.2						0
LZD		Spring	7								0
140	IE-1513133-3-1140	31/01/19	6	2	221	236	117	39	70	36	27
Ballinaguila Frank Eily		7y 9m	278		2						0
MJI		Spring	7								1
370	IE-1513133-2-1370	07/02/19	4	2	163	210	155	81	274	34	105
Ballinaguila Parkwhit Aine		5y 9m	271		1.9						1
IE151013771567		Spring	7								0
201	IE-1513133-6-1201	18/02/19	6	3	223	335	152	115	258	71	88
Ballinaguila Martini Mandy		7y 9m	260		1.7						1
IE151054081214		Spring	7	1	05-jun						0
345	IE-1513133-1-1345	13/02/19	4	3	188	609	147	580	879		54
Ballinaguila Aristotle Tina		5y 9m	265		1.7						1
BQB		Spring	7	2	20-apr	05-mar					0
81	IE-1513133-2-1081	27/01/19	7	1	254	139	168	34	22	29	41
Ballinaguila Martell Eileen		8y 9m	282		1.5						1
VML		Spring	7								0
577	IE-1513133-2-1577	13/02/19	2	1	182	126	83	261	89	78	112
Ballinaguila Primo Eily		3y 9m	265		1.4						0
PBM		Spring	7								0
929	IE-1513133-5-0929	04/02/19	9	1	119	164	229	52	182	28	262
Ballinaguila Hylke Moll		10y 9m	274		1.3						4
TIH		Spring	7	1	18-may						1



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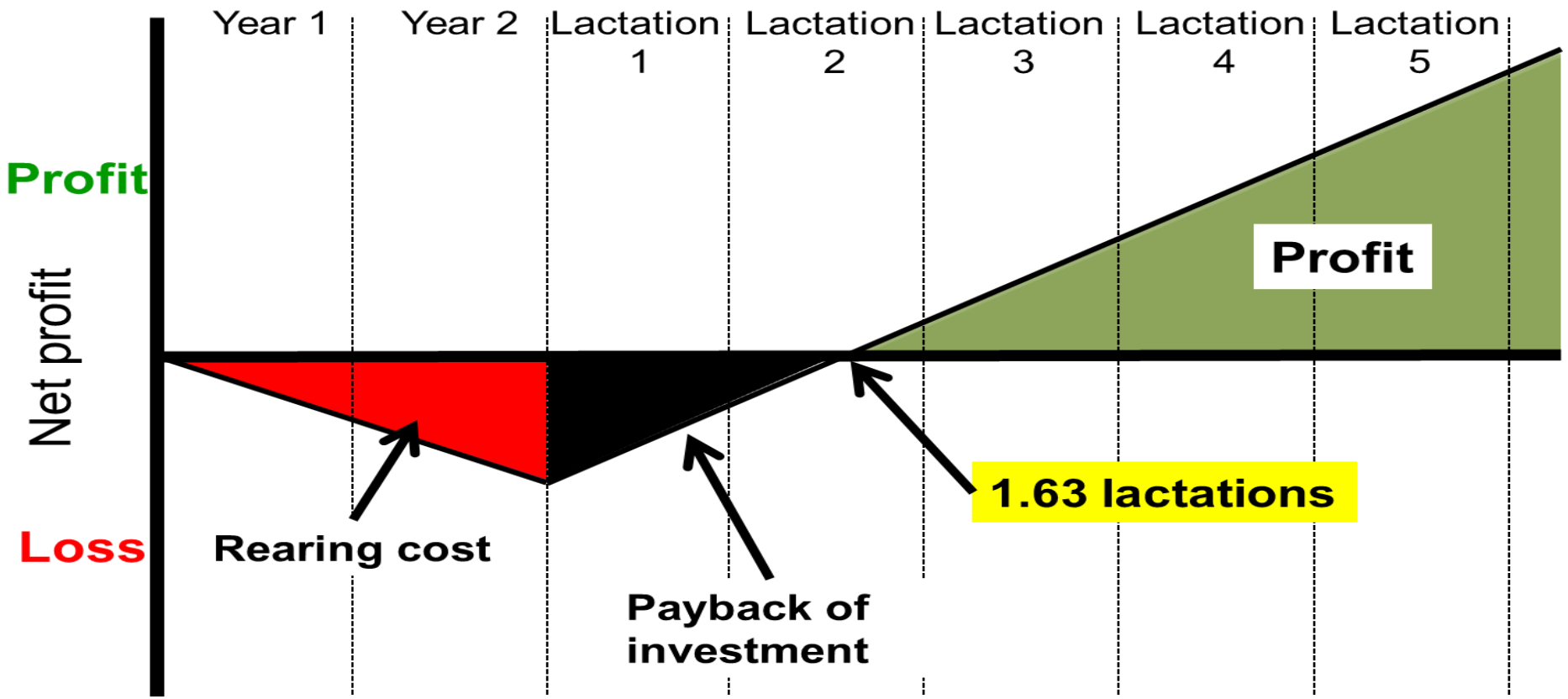
Highest Priority Critically Controlled Antimicrobials- Intramammary Dry and Lactating Cow Tubes

Johne's Programme

- Provide additional reassurance to the marketplace
- Reduce the level of infection in their herds, where present
- Ensure that negative herds remain clear
- Improve calf health and farm biosecurity in participating farms

Herd Maturity

- Target: 5 to 5.5 lactations/cow; 18% replacement rate
- 1st calvers have 22% less milk than 3rd lact +



Should you breed your own replacements?

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Just because you reared her doesn't mean you should milk her!

- Spring Calving need high €BI maiden heifers, high health status calving at target weight in February.

- **Herd €BI**
- **Spread in €BI**
- **Spread in Calving**
- **Health Status – Johnes & Neospora**
- **Calf Rearing – Pneumonia & Scour**

Extreme differences in herds

Two herds

1. Low C.O.W. herd
2. High C.O.W. herd

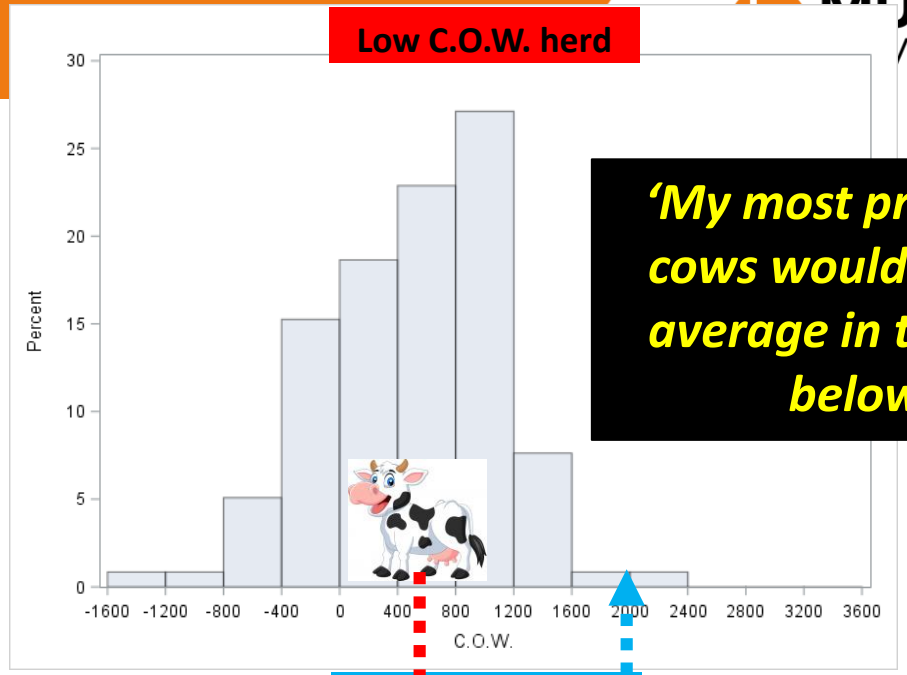
Selected on comparable criteria

- Approximately same number of cows
  - Low C.O.W. herd = 118 cows
  - High C.O.W. herd = 135 cows
- Median spring calving date similar
- Geographically close

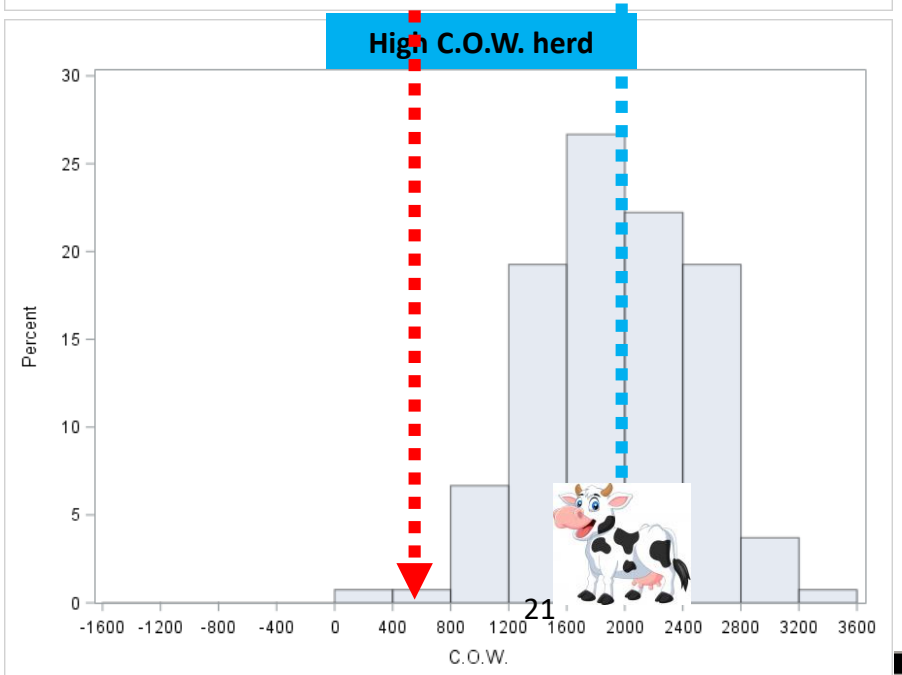
C.O.W. distribution of both herds

- Graphs on same scale
- Big spread/shift

= Average cow in herd



'My most profitable cows would only be average in the herd below'



What does a herdowner need to do to decide which cows to cull? Milk recording, Ancestry, Genetics & Heifer Rearing

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Genomic Service

What does a herdowner need to do to decide which cows to cull?

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1. **Milk record** – 4+ times – 1st by St. Patrick's day
2. **Johnes testing** - once annually
3. **Ancestry** – records or genomic test

Decision time for Culling - Spring & Autumn

Spring – Chronically SCC infected cows that did not cure in the dry period

Autumn – Poor performers and Johnes positives.

Source – High €BI February-calving heifers

CULLING

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- **Profitability increased**
- **Profitable no longer subsidising the unprofitable cows**
- **Align stocking rate to grass growth**
- **Labour reduction**
- **Housing- 1 cubicle per cow**
  - Intakes
  - SCC
  - Immunity
  - Production
  - Lameness

Dairy Herdowner's Needs

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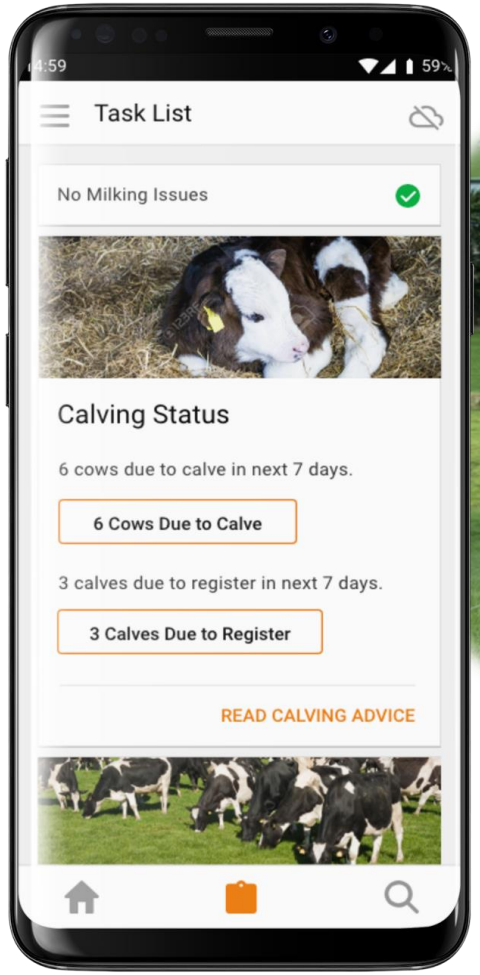

Work life balance

Profit

Health & Wellbeing

Protection

Reduced time per cow

Lean

Ireland is the <u>best place in the world</u> to be a Dairy Cow

&

Ireland is the <u>best place in the world</u> to be a Dairy Farmer