



DAIRYGOLD/TEAGASC DAIRY DEVELOPMENT PROGRAMME 2014 – 2017

**Farm Walk
On the Farm of
Richard Geary,
Seamount, Carrigaline, Co. Cork
Thursday 13th April, 2017
(By kind permission)**

Focus of the Programme:

Delivering Profitable & Sustainable Dairying

Today's Agenda

- 1. Outline of Farm Details.**
- 2. Developments in EBI & Genomics**
- 3. Breeding Goals for this farm.**
- 4. 2017 Breeding Season Plan for this farm.**
- 5. Stock Bull Management.**

Website :<http://www.agritrading.ie/Dairygold--Teagasc-Joint-Programme>

Speakers and Contacts

| | | |
|----------------------------|--|--------------------|
| Brendan Smiddy | Teagasc, Midleton | 087 2432309 |
| Diarmuid O 'Riordan | Dairygold Area Sales Manager | 086-2461821 |
| Billy Cronin | Dairygold Head of Transport & Milk Management | 025 24411 |
| Terry Dillon | Munster AI | |
| John Maher | Teagasc Moorepark | 025 42244 |
| Adrian O'Callaghan | Teagasc Joint Programme Advisor | 087 9833679 |

Farm Event Safety Notice

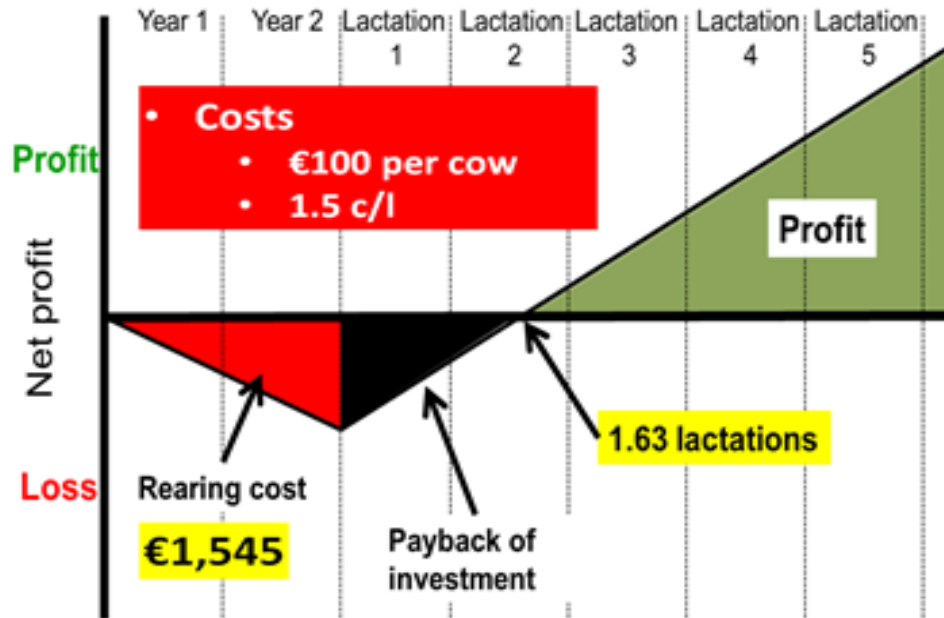
**Please take care entering and exiting the parking area and while crossing the road.
Please take care during the Farm Walk, as you will be walking on farm roadways and concrete surfaces,
which may be slippery.**

Be aware of livestock on the farm and avoid any unsafe movement in their vicinity.

Please take care with wire fences, gates and doors.

PLEASE DISINFECT FOOTWEAR

Return on investment



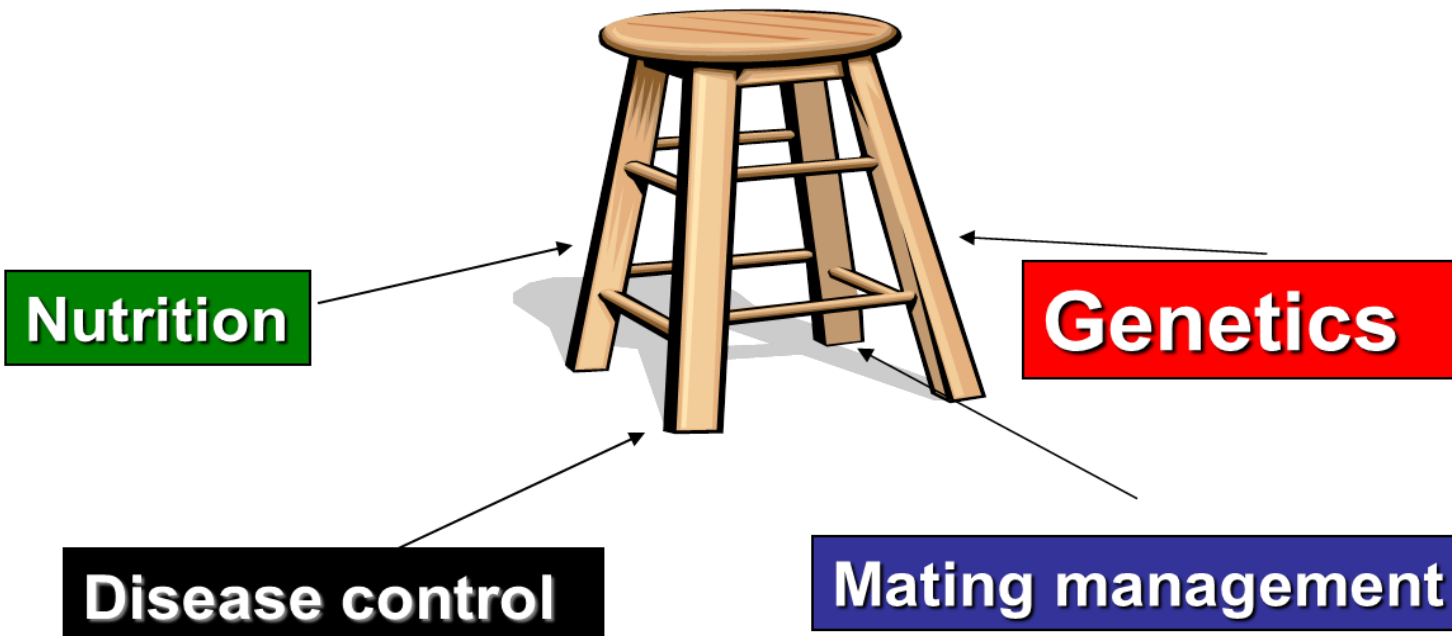
The power of genetics

Next Generation Herd 2013-2016

| | ELITE | AVERAGE |
|-------------------------|-------|---------|
| Milk Receipts | €1891 | €1862 |
| Pregnant to 1st service | 60% | 46% |
| 6-wk pregnancy rate | 73% | 58% |
| Final in-calf rate | 92% | 81% |

High vs. Low Fertility EBI SI

| Early post-calving | At breeding |
|-----------------------|------------------------|
| Greater feed intake | Stronger heats |
| Better BCS | Fewer silent heats |
| Earlier cyclicity | Less ovulation failure |
| Better uterine health | Greater progesterone |



**The
Fertility
Stool**

Farm Details

| Land | | Stock Details | |
|------------------------|----------|------------------|-----|
| Land owned (Ha) | 67 | Dairy cows | 170 |
| Land leased (Ha) | 26 | 0-1 replacements | 40 |
| Overall S.R (L.U/Ha) | 2.35 | 1-2 replacements | 43 |
| Grass/Maize | 84Ha/9Ha | Cattle 1-2 | 10 |
| Milking platform (ha) | 68 | Vac Bulls | 3 |
| SR on milking platform | 2.5 | Bulls | 2 |

Herd Performance

| Milk Production | 13/04/17 | 2016 |
|-------------------------|----------|------|
| Milk yield (litres/cow) | 26.2 | 6418 |
| Milk protein % | 3.45 | 3.62 |
| Milk fat % | 3.95 | 4.24 |
| Milk solids (kg/cow) | 2.05 | 520 |
| SCC(,000 cells/ml) | 119 | 148 |
| Meal (kg/cow) | 3.2 | 1000 |

Financial Performance

| | Richard Geary c/litre 2016 | Average Profit Monitors c/litre 2016 | Top 10% Profit Monitors c/litre 2016 |
|---|-------------------------------|---|---|
| Dairy Output | 34.44 | 29.19 | 30.69 |
| Feed | 4.15 | 3.90 | 3.47 |
| Fertiliser/Lime | 2.16 | 2.42 | 2.18 |
| Vet | 0.78 | 1.12 | 0.98 |
| AI | 0.40 | 0.54 | 0.49 |
| Contractor | 2.24 | 1.72 | 1.37 |
| Other Variable Costs | 1.71 | 1.77 | 1.47 |
| Total Variable Costs | 11.44 | 11.46 | 9.97 |
| Machinery | 0.79 | 1.25 | 0.88 |
| Car, ESB, Phone | 1.30 | 1.23 | 0.92 |
| Depreciation | 1.12 | 1.79 | 1.69 |
| Hired Labour | 3.31 | 1.16 | 1.00 |
| Other Fixed Costs | 1.54 | 3.46 | 2.58 |
| Farmer's Own Labour (€60K/total Litres) | 6.07 | 7.35 | 6.27 |
| Total Fixed Costs(incl farmers own labour) | 14.13 | 16.24 | 13.35 |
| Total Costs | 25.57 | 27.7 | 23.32 |
| Total Milk Solids Produced kg/Ha | 1232 | 1,001 | 1,282 |

Calving and Fertility Performance

| | Year | Cows | Heifers |
|---|------|------------|----------|
| Calving Start Date | 2017 | 13-01-17 | 16-01-17 |
| Median Calving Date | 2017 | 06-02-17 | 05-02-17 |
| Calving Period | 2016 | 13 wks. | 8wks 4d |
| Calving Interval (Days) | 2017 | 366 | |
| Spring 6 wk. Calving Rate (%) | 2017 | 76% | |
| 3 wk. Submission rate | 2016 | 79% | 80% |
| 6 wk. Submission Rate (%) | 2016 | 93% | 95% |
| Breeding Season Length | 2016 | 13 wks. 3d | 10 wk. |
| 1 st Service Conception Rate | 2016 | 52% | 80% |
| Empty Rate (%) | 2016 | 11% | 2% |
| Breeding Start Date | 2017 | 17-4-17 | 21-4-17 |
| Breeding Finish Date | 2017 | 20-7-17 | 01-7-17 |

Comparison of Fertility & Calving Data Statistics 2016

| Description | Richard Geary 2017 | Richard Geary 2016 | Dairygold Average 2016 | Dairygold Top 10% 2016 | Nationally 2016 |
|------------------------------------|--------------------|--------------------|------------------------|------------------------|-----------------|
| Calving Interval (days) | 366 | 374 | 384 | 363 | 389 |
| 6 week calving rate | 76% | 72% | 63% | 82% | 58% |
| Total Dairy replacements | 21% | 38% | 23% | 40% | 24% |
| % Heifers Calved at 22 – 26 months | 100% | 100% | 66% | 100% | 59% |
| Herd EBI | €106 | €104 | €67 | €96 | €70 |

Key System Drivers – Resilient Systems

| | Average Dairy Farmer | Target | Economic Return € | Potential change in Profit € |
|--------------------------------|-----------------------|--|-------------------|------------------------------|
| Fertility (6 wk. calving rate) | 57 | 90 | €8.22/1% | €271/cow |
| Mean calving date | 9 th March | 15 th -25 th Feb | €3.86/day | €85/cow |
| Grass Utilised/Ha | 7.3ton DM/Ha | 12 ton D.M/Ha | €180/ton | €850/Ha |

**Economic Breeding Index (EBI)
Herd Summary - Feb 2017**

LoCall 1850 600 900

Herd Owner: RICHARD GEARY

Herd Number: D2170125

Data Extracted: 03/03/2017

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 € |
|--------------------------|-------------|-----------|-------|--------|---------------|-------------|------------------|-------------|-------------|--------------|-------------|---------------|--------------|
| Cows with EBI | 155 | 22 | | | | € 29 | € 45 | € 31 | € -6 | € 4 | € 3 | € 1 | € 106 |
| Missing EBI* | 0 | 6.1 | 0.10 | 1.4 | 24.2% | 37.8% | 26.2% | -5.5% | 3% | 2.2% | 1.2% | | |
| Total Cows | 155 | 3.7 | 0.05 | -2.3 | | | | | | | | | |
| 1st Lactation | 51 | 26 | | | | € 32 | € 56 | € 34 | € -7 | € 4 | € 2 | € 1 | € 121 |
| | | 7.5 | 0.12 | 1.6 | 23.3% | 41% | 24.9% | -5.4% | 2.7% | 1.8% | 0.9% | | |
| | | 3.9 | 0.06 | -2.9 | | | | | | | | | |
| 2nd Lactation | 22 | 38 | | | | € 45 | € 37 | € 35 | € -5 | € 1 | € 3 | € 0 | € 117 |
| | | 10.7 | 0.16 | 1.2 | 35.6% | 29.3% | 27.5% | -4% | 1.1% | 2.3% | 0.2% | | |
| | | 5.7 | 0.08 | -1.9 | | | | | | | | | |
| 3rd Lactation | 22 | 7 | | | | € 31 | € 47 | € 36 | € -7 | € 3 | € 2 | € 2 | € 114 |
| | | 5.7 | 0.10 | 1.4 | 24% | 36.6% | 28.4% | -5.4% | 2.6% | 1.5% | 1.5% | | |
| | | 3.8 | 0.07 | -2.4 | | | | | | | | | |
| 4th Lactation | 22 | 45 | | | | € 32 | € 34 | € 32 | € -6 | € 3 | € 2 | € 2 | € 97 |
| | | 6.3 | 0.08 | 1.2 | 29.1% | 30.6% | 28.9% | -5.8% | 2.5% | 1.6% | 1.6% | | |
| | | 4.4 | 0.05 | -1.6 | | | | | | | | | |
| 5th Lactation (+) | 38 | 3 | | | | € 12 | € 41 | € 22 | € -6 | € 6 | € 4 | € 2 | € 80 |
| | | 1.6 | 0.03 | 1.2 | 13.3% | 44% | 24.3% | -6.4% | 6% | 3.9% | 2.1% | | |
| | | 1.6 | 0.03 | -2.1 | | | | | | | | | |

2. Dairy Youngstock

| | | | | | | | | | | | | | |
|--------------------|-----------|-----------|------|------|-------|-------------|-------------|-------------|-------------|------------|------------|------------|--------------|
| 2017 Calves | 31 | 52 | | | | € 53 | € 98 | € 40 | € -9 | € 6 | € 3 | € 3 | € 195 |
| Missing EBI* | 1 | 11.3 | 0.16 | 3.2 | 25% | 46.1% | 18.7% | -4.4% | 3% | 1.5% | 1.3% | | |
| Total Calves | 30 | 7.0 | 0.1 | -4.9 | | | | | | | | | |
| 2016 Calves | 65 | 46 | | | | € 42 | € 78 | € 36 | € -8 | € 6 | € 4 | € 1 | € 158 |
| Missing EBI* | 0 | 8.2 | 0.12 | 2.4 | 24.1% | 44.9% | 20.4% | -4.6% | 3.2% | 2.1% | 0.7% | | |
| Total Calves | 65 | 5.6 | 0.08 | -4.0 | | | | | | | | | |

To Calculate Herd Genetics for Protein % & Fat %

PD for Protein % x **3.5** + **3.40%**

PD for Fat % x **3** + **3.90%**

So for Richard Geary – Protein % = 0.05 x 3.5 = 0.17 + 3.40% = 3.57%

Fat % = 0.10 x 3 = 0.30 + 3.90% = 4.20%

2017 AI Bulls to be used on Richard Geary's Herd

| | EBI(€) | EBI Sub Index | | | | | | | PTA's | | | | | | | |
|-------------------------|--------|---------------|----------|----------|----------|-----------|----------|----------|-------|------|------|--------|------|------|---------|------|
| | | Milk (€) | Fert (€) | Calv (€) | Beef (€) | Maint (€) | Mgmt (€) | Hlth (€) | M Kg | F Kg | P Kg | F+P Kg | F % | P % | CI days | SU % |
| All Cows in Herd | 106 | 29 | 45 | 31 | -6 | 0 | 3 | 1 | 22 | 6.1 | 3.7 | 9.8 | 0.10 | 0.05 | -2.3 | 1.4 |
| Predicted 2018 Calves | 179 | 52 | 86 | 38 | -7 | 3 | 4 | 3 | 77 | 9.4 | 7.3 | 16.7 | 0.11 | 0.08 | -4.3 | 2.7 |
| Bulls Weighted Averages | 252 | 74 | 127 | 46 | -9 | 5 | 4 | 5 | 132 | 12.6 | 11.0 | 23.6 | 0.12 | 0.11 | -6.3 | 4.0 |

Bulls selected for use in your herd

| Bull | Name of Bull | EBI (€) | No of Straws | EBI Sub Index | | | | | | | PTA's | | | | | | | Supplier | | |
|--------|----------------------------|---------|--------------|---------------|----------|----------|----------|---------|---------|----------|-------|------|------|--------|------|------|---------|----------|------|-----------------|
| | | | | Milk (€) | Fert (€) | Calv (€) | Beef (€) | Mnt (€) | Mgt (€) | Hlth (€) | M Kg | F Kg | P Kg | F+P Kg | F % | P % | CI days | | Su % | Pr (€) |
| FR2056 | (IG) MODELIGO WHISPER | 248 | 16 | 53 | 131 | 59 | -10 | 13 | 4 | -2 | 43 | 14.8 | 6.2 | 21.0 | 0.22 | 0.08 | -6.6 | 4.1 | 19 | NCBC,Munster,PG |
| FR2297 | (IG) CASTLEBLAGH RONNIE | 231 | 28 | 77 | 120 | 41 | -10 | -2 | 2 | 2 | 225 | 14.5 | 12.3 | 26.8 | 0.09 | 0.08 | -5.5 | 4.4 | 19 | NCBC,Munster,PG |
| FR4118 | (IG) COMMEEN TOPMAN | 287 | 17 | 84 | 149 | 50 | -11 | 8 | 1 | 6 | 121 | 14.2 | 12.1 | 26.4 | 0.16 | 0.13 | -6.9 | 5.3 | 21 | NCBC,Munster,PG |
| LWR | (IG) LONGVIEW RELIABLE | 231 | 16 | 80 | 109 | 49 | -13 | -2 | 2 | 6 | -2 | 8.3 | 10.7 | 19.0 | 0.14 | 0.18 | -5.6 | 3.3 | 19 | NCBC,Munster,PG |
| FR2031 | (IG) TISAXON ELMO | 243 | 28 | 56 | 121 | 55 | -11 | 12 | 5 | 7 | 127 | 5.9 | 9.2 | 15.1 | 0.02 | 0.08 | -7.0 | 2.8 | 19 | NCBC,Munster,PG |
| FR2239 | (IG) DIAMOND ANTON | 266 | 17 | 81 | 128 | 49 | -8 | 5 | 4 | 7 | 146 | 14.9 | 11.8 | 26.7 | 0.15 | 0.11 | -6.3 | 4.2 | 20 | NCBC,Munster,PG |
| FR2298 | (IG) OLCASTLETOWN RONALDO | 264 | 16 | 97 | 138 | 27 | -2 | -7 | 4 | 7 | 199 | 15.8 | 14.8 | 30.6 | 0.13 | 0.13 | -6.8 | 4.5 | 19 | NCBC,Munster,PG |
| FR2371 | (IG) ARDRAGOLD PARKER | 248 | 28 | 86 | 114 | 50 | -15 | 5 | 3 | 6 | 91 | 14.4 | 11.9 | 26.3 | 0.18 | 0.15 | -6.2 | 3.0 | 19 | NCBC,Munster,PG |
| FR2385 | (IG) NEXTGEN YKG CANDY 593 | 282 | 17 | 67 | 164 | 34 | -15 | 26 | 3 | 2 | 134 | 11.6 | 10.2 | 21.7 | 0.11 | 0.09 | -7.7 | 5.7 | 20 | NCBC,Munster,PG |
| HZB | (IG) BALLYDEHOB PAT 1356 | 242 | 28 | 69 | 117 | 42 | 4 | -3 | 10 | 4 | 171 | 13.3 | 10.7 | 24.0 | 0.11 | 0.08 | -5.4 | 4.2 | 18 | NCBC,Munster,PG |

Bull Selection Guidelines

Key Objective:

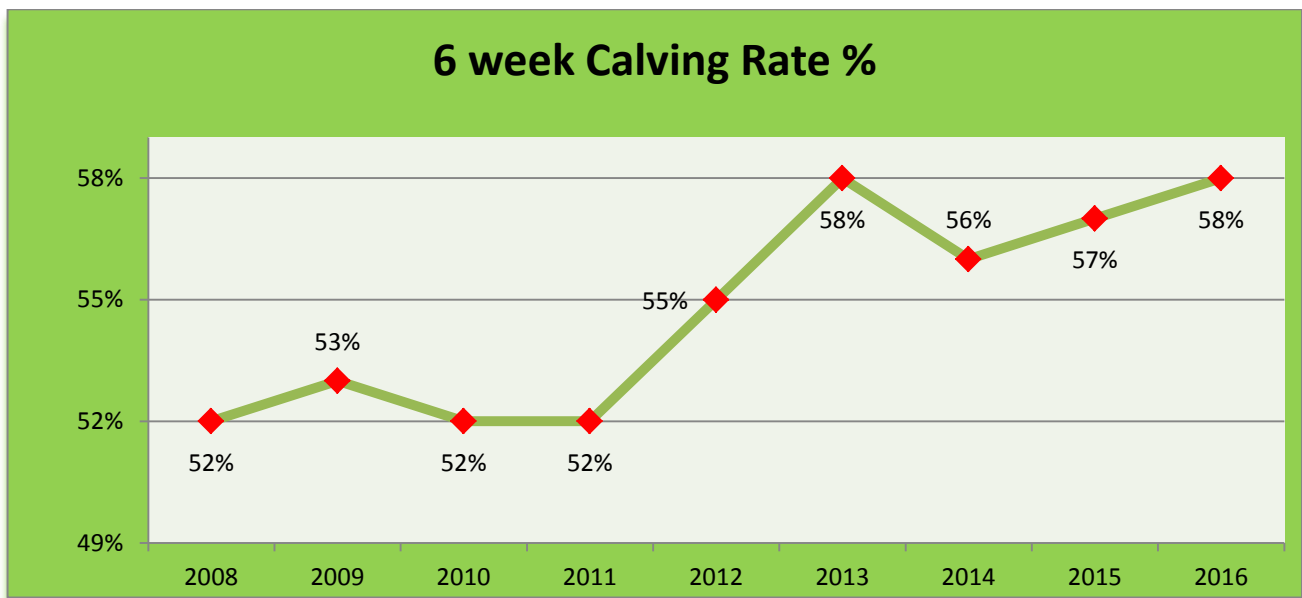
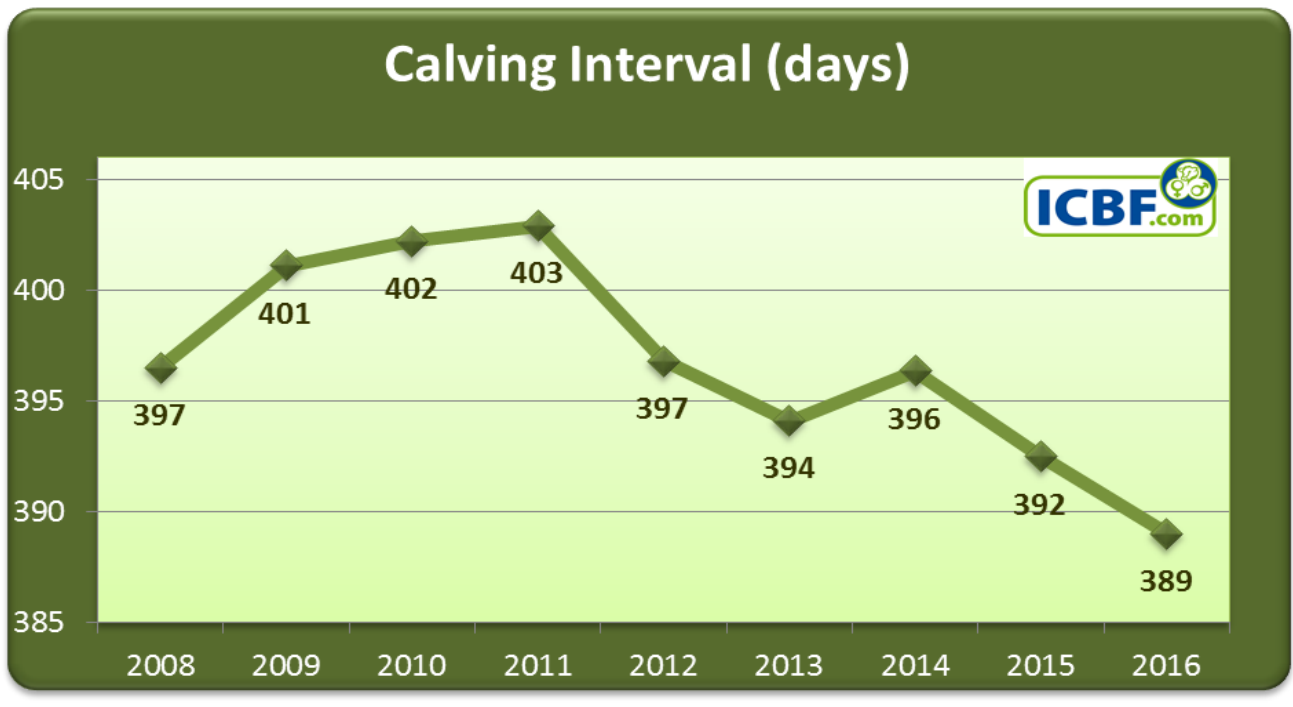
To breed replacement heifers with the genetics to drive profit on your farm.

How do I select the right AI sires for my herd?

- Determine the EBI of your herd from ICBF
- Identify weaknesses in herd performance from your Co-op Performance Report
- Decide on your breeding goals and work to achieve these e.g. fertility and higher milk solids
- Select genetic targets in line with your breeding goals e.g. bulls with fertility sub index of €120
- Only easy calving sires for heifers <1.8 C.D, 95% Reliability & 300+ Calving Records
- USE a Team of 6-8 high EBI bulls
- Consider the targets below when selecting AI sires

| EBI target for bull selection | |
|-------------------------------|----------------|
| EBI | €230 or higher |
| Fertility | €120 |
| Milk Solids | +24 kg |
| Fat kg / % | 14 kg & 0.14% |
| Protein kg / % | 10 kg & 0.10% |

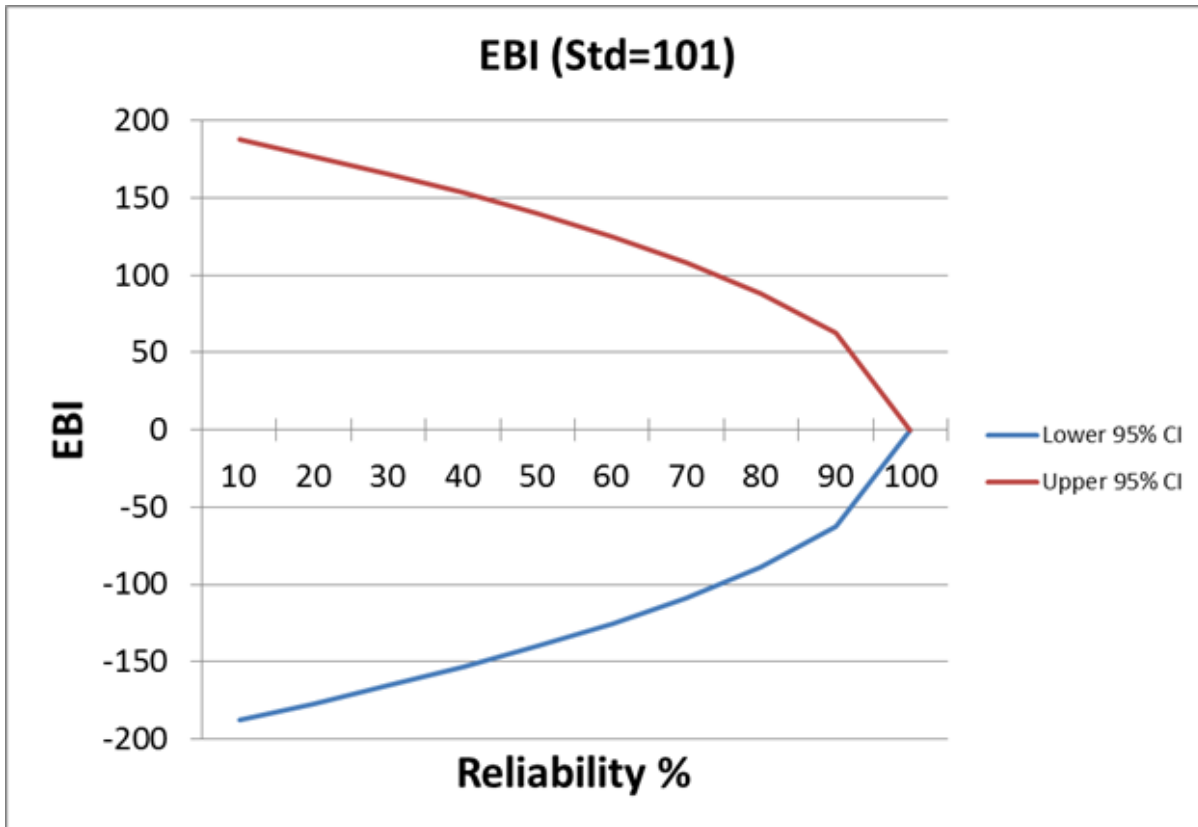
What has happened to Fertility Traits as a result of EBI?



Why the changes in Genomic Proofs?

- A 15% increase in the size of the sire reference population against which the genomic prediction equations are generated.
- The inclusion of almost 1 million more fertility records from the 2017 calving season to date.
- Updates to the genomic evaluation systems and software from which the evaluations are generated.

EBI values for bulls and cows will change due to reliability



Body Condition Scoring

| | | | |
|------------------------------|---------------------|------|--|
| 1 2.5 | Cows too Thin | 3% | <ul style="list-style-type: none"> • Handle in crush-pins, loins & ribs • Deal with thin cows – OAD • Identify, Leave with main herd, maintain feeding rates, • OAD until served |
| 2.75 3.00 3.25 3.50 | Ideal Service Score | 90%+ | |
| 4.00 5.00 | Cows too fat | 2% | |

Condition Score NOW – Why??

- Thin cows < 2.75, are slow to go back in calf – 16% submission rate
- Thin cows will not peak – less milk (1L/cow/May = 220L/cow/year)
- BCS loss > 0.5 (20-25kg)
 - Lower submission rates – 50%
 - Lower conception rates – 20%
- More cull cows

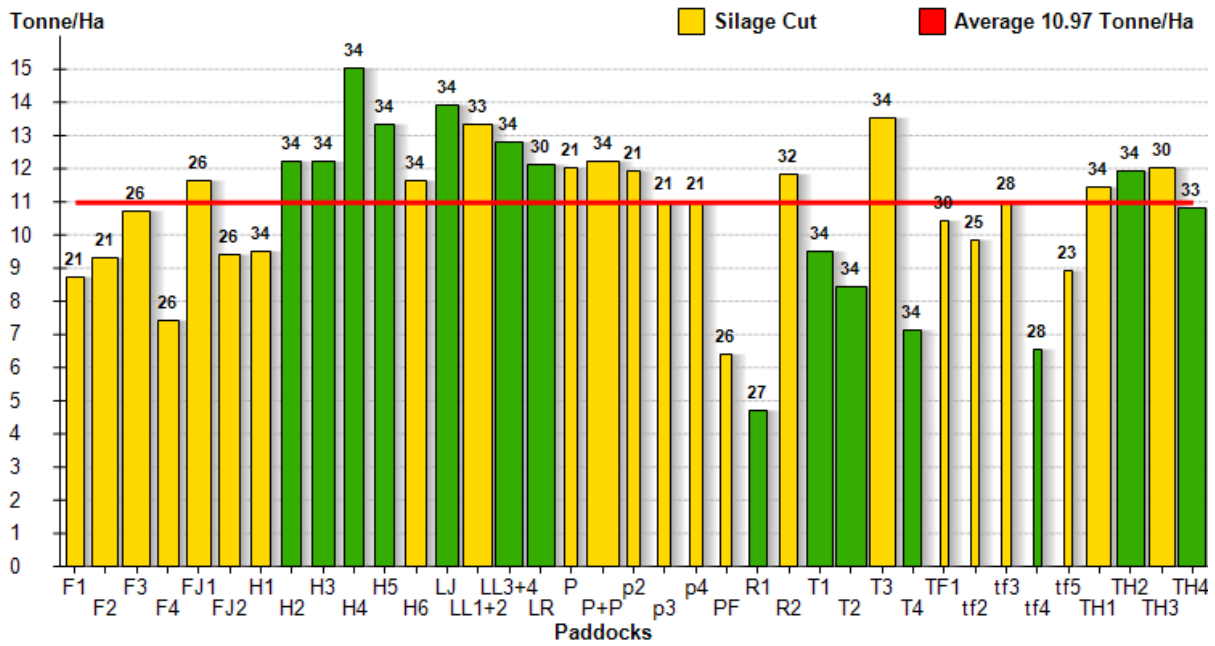
Projected 6 wk. Calving Rate from various Submission & Conception Rates

KEY:~ €8.22 per cow per 1% lower 6 week calving rate
 - €3 (Empty Rate), €1 (Vet/A.I costs), €4 (Milk sales)

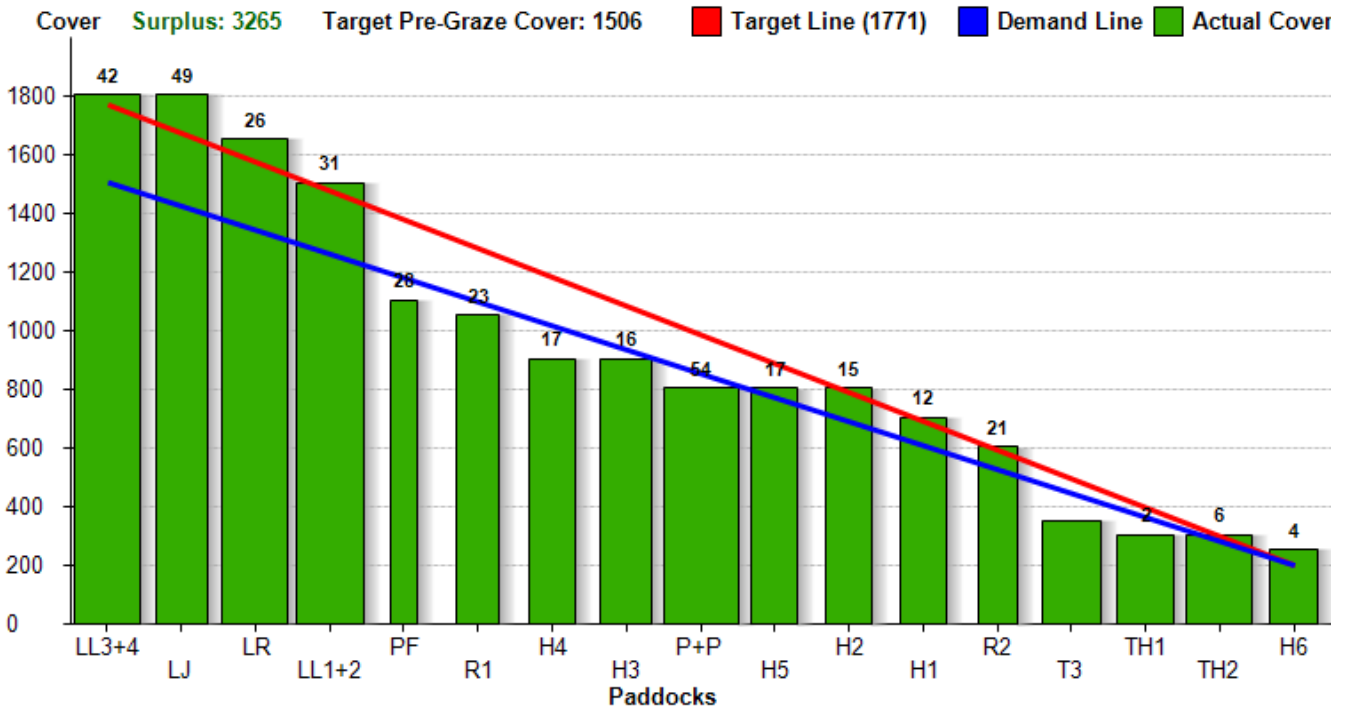
| | | Conception rate (%) | | |
|-------------------------|----|---------------------|----|----|
| | | 40 | 50 | 60 |
| Heat Detection Rate (%) | 90 | 62 | 73 | 82 |
| | 70 | 55 | 65 | 75 |
| | 50 | 46 | 56 | 65 |

- Good record keeping is key to achieving these targets
- Identify problem cows, low BCS, difficult calving's, twins, retained cleanings & milk fever
- These cows have increased probability of being dirty and possibility not cycling

Grass Grown 2016



Grass Wedge 10/4/2017



| | |
|-----------------------------------|------------------------|
| Average Farm Cover (Kg DM/Ha) | 936 |
| Grass cover per cow (kg DM) | 237 |
| Supplementation: Meal | 3 |
| Daily growth rate /Ha | 48 |
| Demand/Ha | 62 |
| Stocking Rate | 4 L.U/Ha |
| End 1 st Rotation 2017 | 12 th April |
| Tonnes grass grown 2016 | 11 tonnes DM/Ha |

FERTILITY & BREEDING MATTERS



By **DOREEN CORRIDAN**,
MVB MRCVS PhD, Munster Cattle Breeding

Stock Bull Purchase

1

Ensure enough bull power, this is crucial for compact calving, 1 young bull needed per 15-20 empty females. Our female numbers are increasing and our stock bull numbers have not increased accordingly.



2

Check his ease of calving index. In AI we are finding that for maiden heifers you need less than 2% difficult calving figure and for cows 4% or less. The reliability is lower in stock bulls and to be sure you need to try them out in cows in their first year for security.

<2% Calving difficulty

3

Buy him/them two months in advance of when needed, to allow for acclimatisation and disease testing.



4

Bulls are very susceptible to stress and sudden nutritional changes.



5

Footbath him/ them on arrival to avoid introduction of Mortellora and pair him with another animal.



6

Vaccinate him/ them with whatever the herd is being vaccinated for.



7

Get him/ them fertility tested by your vet.



8

Monitor him/them throughout the breeding season. Young bulls need to be fed during the breeding season.



Notes

