

# Preparing for Breeding Success

Edition 1

Spring Management Series 2024



## Farmer Focus



**Kevin and Enda Farrell**  
**Corobolla, Ballymahon, Co. Longford**

### Farm Profile

**Due start of Calving:** 1st February

**% of herd calved:** 82%

“With 82% of the cows calved in February this year, it leaves us in an ideal scenario preparing for the breeding season. The cows will have plenty of time to recover post calving to ensure we have another successful breeding season in 2024. We aim to continue to seek every improvement in the fertility of the herd, and increasing the genetic gains made by the replacement heifer focusing heavily on PTA's for Protein and Butterfat %, over and above the Cows.”



The 2023 calving season, resulted in 91% of the herd being calved in February and March, with the remainder of the herd calved by the end of April. The herd achieved a 367 day Calving Interval (C.I), with an 87% 6 week calving rate and 100% of the heifers calving between 22-26mths.

### Targets for 2024 Breeding Season

Kevin and Enda plan to build on their genetic gains made in the vision of breeding their ideal cow of the future, achieving over 520kg MS/Cow delivered of 4% protein, and 5% butterfat, calving in February each year for 6+ lactations. To achieve this goal, the top cows in the herd will be selectively bred to dairy A.I. and all other cows & heifers will receive beef A.I. from MSD.

With Kevin and Enda's 2024 born replacements thus far registering an impressive €288 EBI with a fertility sub-index of €134, and Protein and Fat % PTA's of 0.18% / 0.26% respectively, Enda has made an increase of €60 in EBI between his cow's average and his 2024 born replacements.



## Farmer Focus (Continued)

With the genetic profile of the herd's future replacements achieving impressive figures over and above the genetic profile of the herd, Kevin and Enda are within touching distances of breeding replacements capable of achieving the performance of their cow of the future.

Within the breeding season management Kevin and Enda intend on submitting 90% + of the cows in e3 weeks, and 100% of the heifers. In order to achieve this target, all problem cows are recorded to be presented to the vet before MSD to ensure their submission in the first 3 weeks.

### Bull Selection

When selecting sires for their 2024 born replacement heifers, Kevin and Enda continue to use the EBI index to select bulls, specially targeting Fertility sub-index, Milk sub-index driven by high Protein & Butterfat % PTA's. After this they select on Health, and Maintenance to ensure a healthy medium size cow.

Kevin and Enda set out the minimum criteria of their bull team as follows; EBI €300 +, Fertility €140 +, Production €100 +, Maintenance €12-€20, Health €7 +, Protein % .20% +, Butterfat % .30% +, and combined Kg MS of 30Kg+.



High Dairy Beef Index (DBI) bulls will be used on cows not selected to generate a replacement heifer from MSD. When selecting beef bulls for use on the dairy herd, Kevin and Enda believe that one bull does not fit all, and have a selection of bulls, ranging in carcasses weights, carcass conformation, and calving difficulty. They aim to maximise carcass weight and conformation while selecting suitable calving difficulty for the different parities within the herd.



## Preparing for Breeding Success

Over the course of this series, the main steps to ensuring a successful breeding season will be discussed, while also taking an in-depth look at the genetic requirements of the offspring in order to breed the cow of the future. Each series, will follow one step in the breeding season, detailing Targets, and timely advice to best ensure a successful breeding season.

**Step 1:**  
Bull Selection

**Step 2:**  
Cow selection & Heifer  
Protocols

**Step 3:**  
Pre-breeding & Breeding  
Season Management

## Bull Selection

The selection of sires to produce the next generation of replacements for your herd is one of the most important tasks to take place on farm each year. The aim of this task should be to maximise the genetic gains made by the future replacement heifers over and above the existing herd of cow.

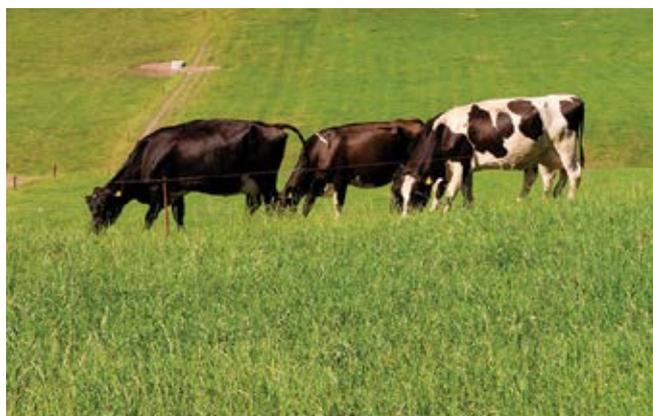
When selecting sires for use on your herd it is important to keep in mind the cow of the future, and what you want your herd to be achieving in 5-7yrs. The table below describes a 6,000kg/cow (5,825litres/cow) delivering milk at Lakeland average percentage solids, vs. 8% solids vs. 9% solids.

When comparing this 5,825litres / cow at 9% solids vs. the Lakeland average performance per cow, the difference in milk value sold per 90 cow drastically increases to €65,340 (At €5.50/Kg Ms).

So the question is asked *“What do our replacement heifers genetics need to be to achieve 540kg MS at 9% solids?”*

When targeting 9% combined solid percentages, it is vital to understand the PTA's within EBI sub-indexes. Shown below is a formula for working out your herds PTA's potential. This herd has a Butterfat PTA of 0.28%, and a Protein PTA of 0.18% which will result in them delivering 4.01% Protein, and 5.01% Butterfat. When selecting sires this year it is critical to maximise the genetic gains made by your herd in both Protein, and Butterfat percentage PTA's. Target to have your replacement heifers capable of delivering 4% Protein (0.18%) and 5% Butterfat (0.28%).

Milk Price €5.50/ KgMs	Co-op Av. (3.43% Protein, 4.16% Butterfat)	8% solids (3.6% Protein, 4.4% Butterfat)	9% Solids (4% Protein, 5% Butterfat)
6,000kg / Cow	455kg MS	480kg MS	540kg MS
€ / Cow	€2,503	€2,640	€2,970
Difference € / 90 Cows	-	<b>+€12,330</b>	<b>+€42,030</b>



	Fat PD	Protein PD
<b>Herd average</b>	<b>0.28</b>	<b>0.18</b>
<b>Multiply by</b>	3.72	3.65
<b>=</b>	<b>1.04</b>	<b>0.66</b>
<b>Add</b>	3.97	3.35
<b>Predicted milk %</b>	<b>5.01</b>	<b>4.01</b>

Genetics and Fertility		
Fertility Sub-index	High ≥ €50	Low ≤ €10
% Cycling @ Day 42	82%	22%
Submission Rate	86%	72%
Preg. Rate 1st A.I.	55%	33%
Embryo Mortality	2%	13%

When in the pursuit of this high level of performance, you first must look at the fertility performance of the herd. Breeding for high fertility sub-index within the herd increases the proportion of cows cycling 42 days post calving, increases submission rates achieved, and conception rates within the herd. This therefore affords you better control of your breeding season, and therefore a tighter calving pattern, maximising days in milk and days in milk at grass. Target a fertility sub-index in your bull team of €120 +, to maximise the retention of your future replacements in the herd.

When selecting bulls this spring, a team average described in the table is vital in maximising the genetic gains made by the replacement heifers.

Sub index	Team average
<b>EBI</b>	€300 +
<b>Fertility</b>	€120 +
<b>Milk/Production</b>	€100 +
<b>Health</b>	€5 +
<b>Carbon</b>	Positive
<b>Kg's Fat &amp; Protein</b>	30kg +
<b>PD Fat%</b>	0.28% +
<b>PD Protein %</b>	0.18% +

- ▶ Ensuring the **Fertility** sub-index is above €120 will give the heifers an increased chance of being retained in the herd for 6 lactations +, and remaining within the first six weeks of calving.
- ▶ Ensuring the **Milk/Production** sub-index is maximised through excellent Protein % (0.18%) & Butterfat % (0.28%) PTA's, will drive lifetime performance of the herd, driven by higher solids percentages.
- ▶ Having a higher **Health** sub-index will decrease the incidences of lameness in the herd, while also reducing the herds SCC.
- ▶ A positive **Carbon** sub-index will reduce the overall emission produced by the herd.
- ▶ Combine **Kg's of Fat and Protein** of above 30Kg will ensure high levels of Kg MS delivered from the herd each year.

## Breeding Season Management

To ensure a successful breeding season, the management element begins when drying off, by ensuring the cows are dried off in correct BCS of 2.75 - 3.25, therefore ensuring they calve down at 3.0 – 3.5BCS.

- ▶ **What to do with under conditioned cows?** With the spring calving season underway on farms, the options are limited when deciding best practices with under conditioned cows. If these cows have already calved, minimising the period of time spent in negative energy balance it critical, therefore once -a-day milking of these cows is an option, until condition score is back on target for breeding at 2.75-3.25 (keep feed intake the same as twice a day milking). For cows yet to calve, ensuring excellent quality silage is offered unrestricted with adequate feed space in the shed, combined with a high spec mineral to complement the silage analysis, will ensure cows are gaining condition score coming up to calving.
- ▶ **Problem Cows?** When preparing for pre-breeding and breeding seasons, record keeping of problem cows throughout the calving season is vital. Problem cows can be described as any cow that had a difficult calving, twins, retained placentas, milk fever, ketosis, mastitis, lameness, or were below targeted BCS. Excellent records of these problem cows throughout the calving season, will allow these cows to be examined by your vet prior to the commencement of the breeding season. Note, although some of these "Problem Cows" may be cycling during pre-breeding, they are at a higher risk of having a uterine infection, therefore reducing their conception rates.



## Joint Development Programme

Lakeland Dairies/Teagasc Joint Development Programme has produced this Spring Management Series. Our advisors are currently available by phone to discuss all farm related matters.

- ▶ Susan Casey 087 099 5359
- ▶ Owen McPartland 087 330 2254
- ▶ Michael Monahan 087 188 3803