**Project Objectives**

* To develop a sustainable high-output grass-based spring milk production system
* To incorporate the most recent advances in grassland management for dairy farms into a high- output system
* Use a type of dairy cow that has good genetic indices for both milk production and fertility
* Employ the best practices from nutrition research and dairy cow husbandry
* Incorporate nutritional studies into a high-output system
* To incorporate management technologies and system attributes that enhance the sustainability of dairy production

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| **Farm Details Week 3rd – 9th July 2023** |
| **Stocking rate on MP (LU/ha)** | **3.27** |
| **Farm Cover (DM/ha)** | **431** |
| **Growth Rate (DM/ha/day)** | **40** |
| **Demand (DM/ha/day)** | **46** |
| **Average grass DM (%)** | **17.1** |
| **Average Concentrate fed (kg/day)** | **3.7** |
| **Average DIM** | **140** |

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| **Cow Details Week 19th - 25th June 2023** |
| **Yield (kg/cow/day)** | **24.55** |
| **Fat (%)** | **4.28** |
| **Protein (%)** | **3.59** |
| **MS (kg/day)** | **2.06** |
| **SCC** | **86,593** |

**Grassland Management:**

Grass growth is unusually slow to pick up post drought, seeing growth fall from 60 last week to 40 this week. Fertiliser is due to be spread in the coming week which hopefully will aid in growth rate recovery. To date 101kg of N/ Ha have been spread on the milking platform, with the July spread due this week. Paddocks with 20% clover are receiving 150kg N/Ha for the year, with the remaining paddocks receiving approximately 220 kg N/Ha. The cows were followed with the topper in the first round to improve grass quality in subsequent rounds. Grass quality is currently excellent, we just need more of it! Silage will most likely be introduced to the diet this week at a rate of 5kg DM/ha with 10kg DM/cow grass being allocated.

**Comments**:

The breeding season started on 2nd of May, and was completed in 9 weeks, the last cow was inseminated on the 2nd of July giving a 61 day breeding season. Heat detection was carried out using automatic activity monitoring and scratch cards, scratch cards are read in the collecting yard before milking. Breeding is done by AI and is carried out twice daily. The cows will be re-scanned at a later date to confirm final numbers for calving 2024.

The bulls selected for this year are:

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| Bull | Name |
| FR5857 | OLCASTLETOWN TIERNAN |
| FR6622 | BAWNGARRA BRÓD |
| FR8613 | S-S-I URA GRASSFIRE-ET |
| FR8562 | OCD LEGACY MASSEY-ET |
| FR7905 | (IG)BUNACLOY ALIBI |

The weighted EBI averages of the bulls are:

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| EBI €  | Milk SI  | Fert SI  | Health €  | Milk kg  | Fat kg  | Prot kg  | F+P kg  | F%  | P%  |
| 264 | 123 | 105 | 16 | 303 | 24 | 17 | 41 | 0.20 | 0.11 |

These bulls were selected for high milk fat and protein and milk PTA to ensure the milk fat and protein % stay positive in addition to selecting for balanced milk production and fertility sub-index values.

The replacement heifers, the first lactation cows and 6 elite cows will receive HF sexed semen. The rest of the cows received beef semen. The replacement heifers were on an oestrus synchronisation programme and were AI’d on Friday May 5th, and were AI’d over 7 weeks.

In week 9 of breeding season, no cow was submitted for first service and there were 3 repeat serves. The three-week (2nd – 22nd May) submission rate is 89% or 50 cows, while the 24-day (2nd – 29th May) submission rate is 96% or 54 cows. At a 30-day scan on the 28th June, of the 46/56 eligible cows, 45 or 80% of the herd, were scanned pregnant in the first 5 weeks.

For more details on the High Output Systems Research Herd visit

https://www.ucd.ie/agfood/about/lyonsresearchfarm/lyonsdairyherd/