



Development of a Sustainable High-Output Grass-Based Spring Milk Production System

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

Farm Details Week 24-30/04/23	
Stocking rate on MP (LU/ha)	3.7
Farm Cover (DM/ha)	635
Growth Rate (DM/ha/day)	48
Demand (DM/ha/day)	48
Average grass DM (%)	17.6
Average Concentrate fed (kg/day)	7.5
Average DIM	70

Cow Details Week 24-30/04/23	
Yield (kg/cow/day)	31.81
Fat (%)	4.09
Protein (%)	3.41
MS (kg/day)	2.34
SCC	79,000



Grassland Management:

The third round of fertilizer (protected urea, 36% N) was spread on Friday the 28th April at a rate of 28 kg N/ha, bringing the total N spread so far to 84kg N/ha.

Cows are being offered an average allocation of 13kg DM/day of grass. Average DM of the grass this week was 17.6%. Cows are being fed on average 7.5 kg/day of a 14% crude protein concentrate in the parlour which is formulated with native ingredients. Cows at ≥ 91 DIM are on 6 kg/day (1/57), cows at 61 - 90 DIM are on 7.5 kg/day (51/57 cows) and cows ≤ 60 DIM on 8 kg/day (6/57).

Comments:

Cows were BCS on April 26th and 91% are 2.75-3.25, with 9% cows <2.75 .

The breeding season will commence on 2nd of May for 12 weeks. Heat detection is being done using automatic activity monitoring and scratch cards which will be read in the collecting yard before milking. Breeding is done by AI and will be done twice daily. 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 will receive beef semen. The replacement heifers are on an oestrus synchronisation programme with PRIDs inserted on the 27th of April and they will be AI'd on Friday May 5th.

For more details on the High Output Systems Research Herd visit <https://www.ucd.ie/agfood/about/lyonsresearchfarm/lyonsdairyherd/>