



## Lyons Systems Research Herd Notes

**Background:** It is widely recognised that grass-based systems offer a competitive advantage and will predominate in Ireland. However, grazing systems that have been developed to utilise large quantities of grazed grass have in the main been based on low-output per cow. In this scenario, high levels of profitability are possible through avid cost control and comparatively high stocking rates for grazing systems. There are now reasons to consider the development of grazing systems that are based on high-output per cow. These reasons include (i) concerns about increasing dairy cow numbers and environmental emissions, (ii) facilitating farm expansion post EU-milk quota removal for land limited and fragmented farms, (iii) lack of available skilled labour on farms to deal with expanding animal numbers. The rationale for this research is that a high output grass-based spring milk production system can be profitable when built on a foundation of good grassland management and meeting both milk and fertility targets and has a place in a sustainable Irish dairy industry.

For more details on the High Output Systems Research Herd visit <http://www.ucd.ie/agfood/welcomemessage/systemsresearchherd/>.

### Lyons Systems Research Herd Notes Week 17-05-2021

#### Farm Details:

Area available: 17.43ha  
Current Stocking Rate (MP): 3.27 LU/ha  
Farm Cover: 662kg DM/ha  
Growth Rate: 63kg DM/ha/day  
Demand: 56kg DM/ha/day  
Average Concentrate Supplement: 6.9kg/head/day  
Average DIM: 83 days



**Current Daily Feed Budget:** The herd are being offered on average 6.9kg of a 14% protein concentrate with non-native ingredients, a 12% protein concentrate with non-native ingredients, a 12% protein concentrate with native ingredients or a 12% protein concentrate with native ingredients supplemented with methionine. These diets will be offered as part of our 2021 nutrition trial until the start of the final grazing rotation in October. Cows at  $\leq 60$  DIM are offered 8kg/day (7/57 cows), cows at 61 - 90 DIM are offered 7.5kg/day (25/57 cows) and cows  $\geq 91$  DIM are offered 6kg/day (25/57 cows). Cows are also allocated 17kg of grass DM and grass DM is 20.3%.

**Grazing Plan:** The current AFC is 662kg DM/ha (range 110 – 1488kg DM/ha). Weather conditions are cool and wet with a total of 20.6mm of rain falling at the nearby Casement Airport between 10<sup>th</sup>-16<sup>th</sup> May. Despite this, growth rates are steady at 63kg DM/ha/day and the paddocks are in good condition post-grazing. The target pre-grazing cover is 1400kg DM/ha. Two paddocks (1.85ha in total) were cut and 13 bales were made on Friday 14<sup>th</sup> May. On 17<sup>th</sup> May, these paddocks were oversown with a medium white clover mix of Aberheald/Buddy at a rate of 5kg/ha. This week they will be rolled and covered in a light washing of slurry to increase seed to soil contact. Target rotation length is set at 21 days.

**Milk Production:** Average production from 10<sup>th</sup>-16<sup>th</sup> May was 34.9 kg/cow at 3.52% fat, 3.56% protein (2.47kg MS) and SCC is 52,000, based on milk recording results from 13<sup>th</sup> May. Four cows are no longer on OAD as their condition has improved. Milk production from this time last year was 33.7 kg/cow at 4.13% milk fat, 3.47% protein, 2.56kg MS and SCC was 35,000.

**Breeding season 2021:** On 1<sup>st</sup> May, the breeding season began. It will last for 12 weeks; 10 planned weeks with an additional 2 weeks, if necessary, based on scans. Breeding is done by AI and will be done twice a day. Bulls selected are FR5860 (Saintbrigid Frank Joseph), FR6139 ((lg)Lisduff Perception), FR5857 (Olcastletown Tiernan), FR6061 (Munta Mystic),



Lyons Systems Research Herd Notes

FR5668 (Peak Chilton-Et), FR4573 (VH Praser), FR5971 (Viaductview Fiveo), FR2400 (S-S-I Headway Alltime-Et) and FR5239 (Hanrahan Olympus). This year we will be breeding 55/57 cows. Two cows are being omitted from breeding due to poor udder confirmation and locomotion and consistent SCC issues.

The weighted EBI averages of the bulls are:

EBI €	Milk SI	Fert SI	Calv €	Beef €	Maint €	Manag €	Health €	Milk kg	Fat kg	Prot kg	F+P kg	F%	P%
281	116	108	44	-9	4.1	2	17	360	22	18	40	0.13	0.09

These bulls were selected for high milk fat and protein milk PTA to ensure the milk fat and protein % stay positive in addition to selecting for a good health and high fertility sub-index values. Nine bulls were selected to increase bull team reliability. Heat detection is being done using Moo Monitors and scratch cards which will be read in the collecting yard.

In the second week of the breeding season (8<sup>th</sup> - 14<sup>th</sup> May), 19 cows were submitted for breeding (35% of breeding herd). To date, a total of 35 cows (65% of breeding herd) have been submitted.

**Herd replacement:** A cow with persistent mastitis issues has left the herd. A suitable replacement will be made to allow research to continue.