



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 31-05-2021

Farm Details:

Area available: 11.46ha (3.91ha out for silage and 2.06ha out for reseed)

Current Stocking Rate (MP): 4.97 LU/ha

Cover/LU: 162kg DM/LU

Farm Cover: 803kg DM/ha

Growth Rate: 102kg DM/ha/day

Demand: 85kg DM/ha/day

Average Concentrate Supplement: 6.4kg/head/day

Average DIM: 97 days



Current Daily Feed Budget: The herd are being offered on average 6.8kg 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 ≤ 60 DIM are offered 8kg/day (3/57 cows), cows at 61-90 DIM are offered 7.5kg/day (12/57 cows), cows 91-120 DIM are offered 6kg/day (41/57 cows) and cows ≥ 121 DIM are offered 3.5kg/day (1/57 cows). Cows are also allocated 17kg of grass DM and grass DM is 16.5%.

Grazing Plan: The current AFC is 803kg DM/ha (range 300 – 1500kg DM/ha). Growth levels have soared due to increases soil temperatures coupled with the residual soil moisture from previous weeks heavy rainfall. Between 24th-30th May, 15.5mm of rain fell at the nearby Casement Airport. This is nearly half of the previous week's total rainfall. Cleanouts as residuals and post-grazing conditions are quite good. Due to the high growth levels, further surplus paddocks (3.91ha, average cover: 1637kg DM/ha) have been taken out as needed to maintain grass quality. Two paddocks (2.06ha) that were sprayed off for reseeding two weeks ago have been grazed to reduce their cover and they are now removed from the rotation too. Maintaining grass quality will be key over the next number of weeks ensuring covers do not get too strong in front of cows. Using PastureBase, we can forward plan what paddocks may need to be removed for silage and allow us to maintain quality and quantity ahead of cows.

Fertiliser: On Friday 28th May, 90kg/ha of 0:0:50 were spread on three paddocks (2.87 ha) post baling



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Milk Production: Average production from 24th-30th May was 32.9 kg/cow at 4.55% fat, 3.61% protein (2.69kg MS) and SCC is 50,000, based on milk recording results from 27th May. Milk production from this time last year was 31.0 kg/cow at 4.31% milk fat, 3.49% protein, 2.42kg MS and SCC was 87,000.

Breeding season 2021: On 1st 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), 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 fourth week of the breeding season (22nd May – 28th May), no cows were submitted for breeding. At the end of the fourth week, 52 cows have been submitted for breeding (95% of breeding herd). Therefore, the 3-week (1st-21st May) and 24-day submission rate (1st-24th May) is 95% (52/55cows).

	No. of cows submitted	% of breeding herd submitted
Week 1 (1 st -7 th May)	16	29
Week 2 (8 th -14 th May)	19	35
Week 3 (15 th – 21 st May)	17	31
3-week submission rate	52	95
Week 4 (22 nd – 28 th May)	0	0