



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) 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 and sustainable when built on a foundation of good grassland management and meeting both milk and fertility targets and has a place in the 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 14-06-2021

Farm Details:

Area available: 15.37 (2.06ha out for reseed)
Current Stocking Rate (MP): 3.71 LU/ha
Cover/LU: 167kg DM/LU
Farm Cover: 618kg DM/ha
Growth Rate: 112kg DM/ha/day
Demand: 63kg DM/ha/day
Average Concentrate Supplement: 5.3kg/head/day
Average DIM: 111 days



Current Daily Feed Budget: Cows are being offered on average 5.3kg of one of four experimental concentrates; 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 61-90 DIM are offered 7.5kg/day (8/57 cows), cows 91-120 DIM are offered 6kg/day (28/57 cows) and cows \geq 121 DIM are offered 3.5kg/day (21/57 cows). Cows are also allocated 17kg of grass DM and grass DM is 19.7%.

Grazing Plan: The current AFC is 618kg DM/ha (range 50 – 1412kg DM/ha) and cover/LU is 167kg DM. The soil type at UCD Lyons is prone to drought conditions if an extended period of reduced rainfall is experienced. Currently, the soil moisture deficit is 42mm (data from nearby Casement Aerodrome). Despite this, growth rate growth is high at 112kg DM/ha/day. Cleanouts as residuals and post-grazing conditions continue to be good. Maintaining grass quality will be key over the next number of weeks to ensure 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. Two paddocks (2.06ha, average cover: 2488kg DM/ha) were mowed for bales on 14th June and they will be baled later this week.



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Milk Production: Average production from 7th - 13th June was 30.2 kg/cow at 4.53% milk fat, 3.51% protein, 2.41kg MS and SCC was 38,000. Milk production from this time last year was 27.5 kg/cow at 4.78% milk fat, 3.43% protein, 2.28kg MS and SCC was 66,000.

Breeding season 2021: The breeding season started on May 1st and will last for 12 weeks; 10 planned weeks with an additional 2 weeks, if necessary, based on scans. Breeding is all by A.I and is done twice daily. Bulls selected are FR5860 (Saintbrigid Frank Joseph), FR6139 ((Ig)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 are read in the collecting yard.

In the sixth week of the breeding season (5th – 11th June), one was submitted for breeding and there were two repeat serves. Therefore, the 6-week submission rate is 98% (54/55 of breeding herd). Cows will receive a 30-day scan on 21st June.

	No. of cows submitted	Total % of breeding herd submitted
Week 1 (1 st -7 th May)	16	29
Week 2 (8 th -14 th May)	19	64
Week 3 (15 th – 21 st May)	17	95
3-week submission rate	52	95
Week 4 (22 nd – 28 th May)	0	0
Week 5 (29 th May – 4 th June)	1	96
Week 6 (5 th -11 th June)	1	98