



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 07-06-2021

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: 165kg DM/LU

Farm Cover: 822kg DM/ha

Growth Rate: 71kg DM/ha/day

Demand: 85kg DM/ha/day

Average Concentrate Supplement: 5.9kg/head/day

Average DIM: 104 days



Current Daily Feed Budget: Cows are being offered on average 5.9kg 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 ≤ 60 DIM are offered 8kg/day (1/57 cows), cows at 61-90 DIM are offered 7.5kg/day (11/57 cows), cows 91-120 DIM are offered 6kg/day (38/57 cows) and cows ≥ 121 DIM are offered 3.5kg/day (7/57 cows). Cows are also allocated 17kg of grass DM and grass DM is 20.4%.

Grazing Plan: The current AFC is 822kg DM/ha (range 110 – 1700kg DM/ha). Growth levels have decreased since last week due to an increasing soil moisture deficit coupled with several paddocks being grazed in tandem (oversown paddocks grazed at a lower cover) meaning four paddocks were in a post grazing vegetative state. The soil type at UCD Lyons is prone to drought conditions if an extended period of reduced rainfall is experienced. Cleanouts as residuals and post-grazing conditions continue to be good. Surplus paddocks (3.91ha, average cover: 3007kg DM/ha) will be mowed this week. Two paddocks (2.06ha) were disced and re-seeded on 4th June with a tetraploid mixture (Aberclyde, Abergain and Gracehill) at 12.5kg/acre and clover at 1.25kg/acre. 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.



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Milk Production: Average production from 31st May - 6th June was 31.0 kg/cow. Milk production from this time last year was 29.0 kg/cow at 4.53% milk fat, 3.57% protein, 2.35kg MS and SCC was 48,000.

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 fifth week of the breeding season (29th May – 4th June), one cow was submitted for breeding and there were six repeat serves. Therefore, at the end of the fifth week, 53 cows have been submitted for breeding (96% of breeding herd).

	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