



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 03-08-2021

Farm Details:

Area available: 17.43ha
Current Stocking Rate (MP): 3.27 LU/ha
Cover/LU: 200kg DM/LU
Farm Cover: 653kg DM/ha
Growth Rate: 61kg DM/ha/day
Demand: 56kg DM/ha/day
Average Concentrate Supplement: 3kg/head/day
Average DIM: 160 days



Current Daily Feed Budget: The amount of concentrates each cow is offered is normally based on DIM. However, due to higher feeding levels earlier in the summer, all cows will be offered 3kg of concentrate until dry-off. Cows are being offered 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 are being offered as part of our 2021 nutrition trial until the start of the final grazing rotation in October. Cows are allocated 17kg DM of grass and grass DM is currently 20.3%.

Grazing Plan: The current AFC is 653kg DM/ha (range 180 – 1600kg DM/ha), cover/LU is 200kg DM and growth is 61kg DM/ha/day. The recent rainfall has decreased the soil moisture deficit from 51mm to 28mm (data from nearby Casement Aerodrome) and consequently grass growth has improved. Grass quality has been difficult to maintain with the extreme variability in weather. Two paddocks (2.09ha) were mowed on 1st August and baled on 3rd August. Residuals are being held at 100 kg DM/ha to retain some moisture in the soil and aid regrowth.

Milk Production: Average production from 26th July-1st August was 26.9 kg/cow at 4.42% milk fat, 3.60% protein, 2.16kg MS and SCC was 52,000. Milk production from this time last year was 27.1 kg/cow at 3.97% milk fat, 3.56% protein, 2.04kg MS and SCC was 131,000.

BCS: The BCS of the herd was recorded on 29th July. The average BCS was 2.99. One cow was ≤ 2.5 (1.8%) and one cow was ≥ 3.5 (1.5%).



Lyons Systems Research Herd Notes

EBI: The average July 2021 genetic evaluation of the herd is as follows:

EBI	Milk	Fertility	Calving	Beef	Maint.	Health	Mgt
202 (Top 1%)	72 (Top 1%)	78 (Top 10%)	42	-10.1	12	6	4
Milk kg	Fat kg	Prot. Kg	Fat %	Prot. %	Calv int.	Surv %	
165	13	10	0.11	0.08	-3.7	2.5	