



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 <https://www.ucd.ie/agfood/about/lyonsresearchfarm/lyonsdairyherd/>

Lyons Systems Research Herd Notes Week 12/09/2022

Farm Details:

Area available: 17.43 ha
Current Stocking Rate (MP): 3.27
Farm Cover: 660 kg DM/ha
Cover LU/ha: 202
Growth Rate: 30kg DM/ha/day
Demand: 20kg DM/ha/day
Average Concentrate Supplement: 4 kg/day
Average DIM: 205 days



Current Daily Feed Budget: Growth is starting to recover with the rain that has fallen over the last week. This has allowed us to alter the feed budget slightly to include more grass in the diet. Cows are being fed 4kg of a 14% crude protein concentrate in the parlour, which is formulated with native ingredients. Cows are now allocated 6 kg of grass DM (up from 3 kg) and 9 kg silage (down from 12kg). Grass DM is currently 19%. The higher level of concentrates and the provision of silage will continue as we monitor AFC over the coming weeks.

Grazing Plan: The current AFC is 660 kg DM/ha (range 200 to 1050kg DM/ha). Average daily growth rate is 30 kg DM/ha this week. From the 5th to 11th September, the average soil temperature at 100mm was 16.2 °C and 32.4 mm of rain fell (rain data from the nearby Met Eireann station, Casement Aerodrome). Grass is starting to recover after a challenging period. While paddocks stayed green throughout the drought, growth was slow and available herbage was low. Demand for grass is currently at 20 kg DM/ha. We are not attempting the “build” covers to the same level as normal autumn targets but rather hold covers steady and allow for some grass in the diet into the late autumn.

Milk Production: Average production from 5th September to 11th September was 18 kg/cow at 4.8 % fat, 3.5 % protein (1.5 kg MS) and SCC was 58,900. Milk production from this time last year was 22.8 kg/cow at 4.73% fat, 3.78% protein (1.94 kg MS) and SCC was 74,000.



EBI: The average July 2022 genetic evaluation of the herd is as follows:

EBI	Milk	Fertility	Calving	Beef	Maint.	Health	Mgt
225 (Top 1%)	72 (Top 1%)	95 (Top 5%)	44	-11	12	8	3
Milk kg	Fat kg	Prot. Kg	Fat %	Prot. %	Calv int.	Surv %	
165	13	10	0.11	0.08	-3.7	2.5	

BCS:

Cows are body condition scored bi-weekly throughout the year. BCS is a key metric to indicate nutritional status. This year to date between 84-96% of the systems herd have been on target for condition (2.75-3.25) at each scoring. Overall 6.8% of the herd have been under condition at some point over the year (below or equal to 2.5) while 2.7% over the herd have been over conditioned at some point over the year.