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 22/03/2021

Farm Details:
Area available: 17.43 ha
Current Stocking Rate (MP): 2.98
Farm Cover: 605kg DM/ha
Growth Rate: 26kg DM/ha/day
Demand: 45kg DM/ha/day
Average Concentrate Supplement: 8 kg/head/day
Average DIM: 32 days
Cows Calved: 52/57 cows

Current Daily Feed Budget: Cows are being fed 8 kg of an 18% crude protein concentrate in the parlour (this is built up gradually over two weeks post-calving). Cows are allocated 15 kg DM of grass.

Spring Grazing Plan: The current AFC is 605kg DM/ha (range 50 to 1400kg DM/ha). Average daily growth rate is 26kg DM/ha this week. Growth has slightly increased this week due to favourable weather conditions. Between 15th-21st March, the average soil temperature at 100mm was 9ºC and 1.1mm of rain fell (rain data from the nearby Met Eireann station, Casement Aerodrome). The drier weather has allowed for good cleanouts of paddocks with a post grazing height of 4cm being consistently achieved over the last week. The target is to finish the first round on the 28th of March. We are on track to have 100% of the milking platform grazed by this date.

Calving: Calving started on 30th January and there is currently 52 of 57 (91%) of the cows calved as of 22nd March. Four cows calved in the last week and one is due to calf this week.

Milk Production: Average production from 15th-21st March was 37.1 kg/cow at 3.91% fat, 3.49% protein (2.75 kg MS) and SCC is 63,000. Fat, protein and SCC figures are based on milk recording results from 18th March. Milk production from this time last year was 34.9 kg/cow and approximately 2.75 kg MS/cow based on milk recording on 27th February 2020 (milk recording was suspended this time last year due to Covid-19 restrictions).

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

EBI	Milk	Fertility	Calving	Beef	Maint.	Health	Mgt

204 (Top 1%)	70 (Top 1%)	79 (Top 5%)	43	-10	12	6	4
Milk kg	**Fat kg**	**Prot. Kg**	**Fat %**	**Prot. %**	**Calv int.**	**Surv %**	
156	13	10	0.11	0.08	-3.9	2.4	

BCS: On 19th March, 54 cows were assessed for BCS. The herd average was 2.97 with five cows (9.3%) being ≤2.5 and two cows (3.7%) being ≥3.5.

Other recent issues: Seven cows are currently on OAD to improve BCS. One of these was diagnosed with pneumonia three weeks ago. This cow is improving, and she is grazing with the rest of the herd. A second cow was lame due to a claw injury three weeks ago but a full recovery was made. One cow was diagnosed with *E. coli* mastitis. As this cow had already lost a quarter, and the loss of a second quarter was imminent, a decision was made to dry her off.