



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) 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 01/03/2021

Farm Details:

Area available: 17.43 ha
Turnout: 16th February
Current Stocking Rate (MP): 2.35
Farm Cover: 991 kg DM/ha
Growth Rate: 11 kg DM/ha/day
Demand: 28kg DM/ha/day
Average Concentrate Supplement: 8 kg/head/day
Average DIM: 15 days
Cows Calved: 42/ 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). Until now, cows were allocated 12 kg DM of grass, but this has been increased to 14 kg of DM due to the current high level of milk production. Grazing residuals will be monitored over the coming week to determine if grass is being used efficiently. While indoors, cows were fed 8kg DM (indoors by night) or 15kg DM (indoors full time) of first cut 78% DMD silage.

Spring Grazing Plan: This year's opening cover was 791 kg DM/ha (17th January). The current AFC is 991kg DM/ha (range 100 to 1620 kg DM/ha). Average daily growth rate was 11 kg DM/ha this week. By 28th February, 29% of the milking platform was grazed. This was achieved using on/ off grazing on lower covers (800-1000kg DM/ha) while grazing power was low, coupled with a tight calving spread giving good grazing power quickly to graze heavier paddocks. Some paddocks suffered minimal surface damage while one paddock was heavily poached due to unexpected rainfall. Between 22nd – 28th February, the average soil temperature at 100mm was 7.3 °C and 12.1mm of rain fell (data from the nearby Met Eireann station, Casement Aerodrome). Due to this rainfall, cows grazed by day but were kept in overnight on 22nd February. For the next two days, cows were kept full time indoors. On 25th February, cows grazed during the day but returned indoors by night. The next day they were released to graze full time outdoors. Grazing paddocks are being carefully selected on ground condition and grass cover. The wettest paddocks are being held off until consistent drier weather prevails.

EBI: The most recent (January 2021) genetic evaluation of the herd is as follows:



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EBI	Milk	Fertility	Calving	Beef	Maint.	Health	Mgt
204 (Top 1%)	69 (Top 1%)	81 (Top 5%)	43 (Top 1%)	-10 (Top 1%)	11 (Top 30%)	6 (Top 5%)	3 (Top 20%)
Milk kg	Fat kg	Prot. Kg	Fat %	Prot. %	Calv int.	Surv %	
152 (Top 20%)	13 (Top 5%)	10 (Top 5%)	0.11 (Top 20%)	0.08 (Top 10%)	-4.1 (Top 1%)	2.4 (Top 1%)	

Calving: Calving started on 30th January and there is currently 42 of 57 (74%) of the cows calved as of 1st March. Of this 42, 9 of the 12 heifers have calved. The average gestation of the calved cows is 276 days. There are 3 more cows due to calf this week.

Milk Production: Average production from 22nd – 28th February was 33.9kg/cow at 4.66% fat and 3.44% protein (2.75 kg MS). SCC is 80,000. Fat, protein and SCC figures are based on milk recording results from 25th February.