



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 08/03/2021

Farm Details:

Area available: 17.43 ha

Turnout: 16th February

Current Stocking Rate (MP): 2.41

Farm Cover: 835kg DM/ha

Growth Rate: 13kg DM/ha/day

Demand: 36kg DM/ha/day

Average Concentrate Supplement: 8 kg/head/day

Average DIM: 20 days

Cows Calved: 45/57 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. Grazing residuals will be monitored over the coming week to determine if grass is being used efficiently.

Spring Grazing Plan: The current AFC is 835kg DM/ha (range 50 to 1700 kg DM/ha). Average daily growth rate is 13kg DM/ha this week. Between 1st-7th March, the average soil temperature at 100mm was 5.5 °C and no rain fell (rain data from the nearby Met Eireann station, Casement Aerodrome). Ground conditions have firmed up nicely with the recent dry weather allowing for good graze outs and increased utilization of grazed grass. Grazing paddocks are being selected on ground condition and grass cover. With just under 80% of the cows calved leading to increased grazing power, the heavier grass covers are being grazed now. To date we have moved slightly ahead of target for the spring rotation planner with 47% of the milking platform grazed. The area grazed per week will however decrease as we start into the heavier covers, bringing us back in line with the rotation planner. The target is to graze 100% of the milking platform by the 28th of March.

Calving: Calving started on 30th January and there is currently 45 of 57 (79%) of the cows calved as of 8th March. There are 3 more cows due to calf this week with 3 due last week yet to calf down also. Calving has slowed down significantly in the last week.

Milk Production: Average production from 1st-7th March was 34.0 kg/cow at 4.93% fat and 3.62% protein (2.91 kg MS). SCC is 89,000. Fat, protein and SCC figures are based on milk recording results from 4th March. Milk production from this time last year was 31.4 kg/cow at 4.6% fat, 3.3% protein (2.3kg MS) and SCC was 62,400.



Lyons Systems Research Herd Notes

BCS: Body condition score assessment was carried out on 51 cows on 4th March. The average score was 3.06 with 7 cows (14%) being ≥ 3.5 and 6 cows (10.5%) being ≤ 2.5 . From 5th March onwards, the thin cows are being milked once a day until their condition improves.

Herd Health: In recent weeks, three cows have developed health issues. One cow was diagnosed with *E. coli* mastitis and has received antibiotics. Another cow was diagnosed with pneumonia so this cow was treated by a vet with steroids. This cow is currently being housed indoors and is being milked once a day. A third cow is lame due to a claw injury so the cow will be kept in a paddock near the parlour for monitoring until symptoms improve.