



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 4/04/2022

Farm Details:

Area available: 17.43 ha
Current Stocking Rate (MP): 3.21
Farm Cover: 732 kg DM/ha
Growth Rate: 19 kg DM/ha/day
Demand: 51kg DM/ha/day
Average Concentrate Supplement: 8 kg/head/day
Average DIM: 45 days
Cows Calved: 56/57 cows



Current Daily Feed Budget: Cows are being fed on average 8kg of a conventional 18% crude protein concentrate or a 14% crude protein concentrate (formulated with native ingredients) in the parlour. Concentrate intake is built up gradually over two weeks post-calving. The concentrate formulation is part of this year's nutritional study. Cows are fed 8kg concentrates from calving to 60 DIM and are allocated 16 kg DM grass.

Spring Grazing Plan: The current AFC is 732 kg DM/ha (range 160 to 1950kg DM/ha). Average daily growth rate is 19 kg DM/ha this week. Between 28th March and 3rd April, the average soil temperature at 100mm was 5.5 °C and 7.3 mm rain fell (rain data from the nearby Met Eireann station, Casement Aerodrome). Paddock cleanouts have been good with a post grazing height of 4 cm being consistently achieved over the last week. The target is to finish the first round in the second week of April.

Calving: Calving started on 30th January and there is currently 56 of 57 (98%) of the cows calved as of 20nd March. One calved in January, 46 in February and 9 in March. The average gestation of the calved cows is 279 days. To date, 29 heifer calves and 27 bull calves have been born.

Milk Production:

Average production from 28th March to April 3rd was 36.15 kg/cow at 4.46 %fat, 3.27 % protein (2.79kg MS) and SCC was 54,000. Milk production from this time last year was 36.5 kg/cow at 4.6% fat, 3.44% protein (2.94 kg MS) and SCC was 54,000.