



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 01/08/2022

Farm Details:

Area available: 17.43 ha
Current Stocking Rate (MP): 3.27
Farm Cover: 419 kg DM/ha
Cover LU/ha: 128
Growth Rate: 36kg DM/ha/day
Demand: 29kg DM/ha/day
Average Concentrate Supplement: 6 kg/day
Average DIM: 163 days



Current Daily Feed Budget: Due to the shortage in grass supply, cows are being fed 6 kg of a 14% crude protein concentrate since 22nd July, in the parlour, which is formulated with native ingredients. Cows are also allocated 11kg of grass DM and 4 kg silage since 29th July. Grass DM is 24.5%. The higher level of concentrates and the provision of silage will continue until grass growth rates improve.

Grazing Plan: The current AFC is 419 kg DM/ha (range 80 to 1100kg DM/ha). Average daily growth rate is 36 kg DM/ha this week. From the 25th July to 31st July, the average soil temperature at 100mm was 18.1 °C and 24.4 mm of rain fell (rain data from the nearby Met Eireann station, Casement Aerodrome). Grass growth has increased slightly this week, and is expected to continue to do so following the expected showers of rain. Grass is stressed and paddocks have developed a lot of stem in the sward. Maintaining grass quality has been challenging this season, due to the fluctuating growth rates. The drought conditions experienced over the last weeks have meant that paddocks that would typically be taken out for surplus silage are being grazed, which in turn will have a knock-on effect on grass quality. Demand for grass is currently at 36 kg DM/ha.

Milk Production: Average production from 25th July to 31st July was 23.56 kg/cow at 4.27 % fat, 3.34 % protein (1.79 kg MS) and SCC was 77,000. Milk production from this time last year was 26.9 kg/cow at 4.42% fat, 3.6% protein (2.16 kg MS) and SCC was 52,000.

Breeding season 2022: The breeding season began on 3rd May and finished on 11th July. Preliminary fertility statistics for the herd are outlined in the following table:



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21 day submission	88%
24 day submission	93%
In calf in first 6 weeks	86%
Conception to first serve*	79%
*not all cows eligible as have not reached 30 days at time of scan	

We will continue to scan cows based on 30- and 60-days post A.I in the coming weeks with a final scan of the whole herd in early October.