



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 18/07/2022

Farm Details:

Area available: 17.43 ha
Current Stocking Rate (MP): 3.27
Farm Cover: 718 kg DM/ha
Cover LU/ha: 220
Growth Rate: 52kg DM/ha/day
Demand: 56kg DM/ha/day
Average Concentrate Supplement: 3.5 kg/day
Average DIM: 149 days



Current Daily Feed Budget: Cows are being fed 3.5 kg of a 14% crude protein concentrate in the parlour which is formulated with native ingredients. Cows are also allocated 17kg of grass DM and grass DM is 20.6 %.

Grazing Plan: The current AFC is 718 kg DM/ha (range 100 to 1800kg DM/ha). Average daily growth rate is 52 kg DM/ha this week. From the 11th July to 17th July, the average soil temperature at 100mm was 20.5 °C and 1.5 mm of rain fell (rain data from the nearby Met Eireann station, Casement Aerodrome). Grass growth has declined in last week as we are currently experiencing a drought. Grass is stressed and paddocks with low covers (500-1000kg DM/ha) have become stemmy. It has been a challenging season to date to maintain grass quality with the peaks and troughs in growth rates. The current drought conditions has 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. The two paddocks taken for surplus baled silage two weeks ago are now in the second phase of growth. Demand for grass is currently at 56 kg DM/ha.

Milk Production: Average production from 11th July to 17th July was 24.1 kg/cow at 4.28 % fat, 3.61 % protein (1.9 kg MS) and SCC was 45,000. Milk production from this time last year was 27.30 kg/cow at 3.69% fat, 3.81% protein (2.05 kg MS) and SCC was 55,000.

BCS: 57 cows were body condition scored on the 13th of June. 4/57 scored 2.5 (7%), whilst 15 scored 3.25. (26.31%) All other cows scored between 2.75 and 3.00 (66.69%).

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.