



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 6/06/2022

Farm Details:

Area available: 14.9 ha
Current Stocking Rate (MP): 3.27
Farm Cover: 602 kg DM/ha
Cover LU/ha: 184
Growth Rate: 48 kg DM/ha/day
Demand: 33kg DM/ha/day
Average Concentrate Supplement: 8kg/day
Average DIM: 111 days



Current Daily Feed Budget: Due to the shortage in grass supply, all cows have been offered 8kg of (14% crude protein) concentrate since 3rd June regardless of DIM, as a short-term strategy to compensate for lower-than-expected grass growth. Prior to this, from 30th May to 2nd June, cows were being fed on average 6.3 kg of a 14% crude protein concentrate in the parlour which is formulated with native ingredients. Cows at ≤ 60 DIM were offered 8kg/day (1/57 cows), cows at 61 - 90 DIM were offered 7.5kg/day (11/57 cows) and cows ≥ 91 DIM were offered 6kg/day (45/57 cows). Cows are also allocated 10kg of grass DM and 5kg silage since 3rd June. The higher level of concentrates and the provision of silage will continue until grass growth rates improve. Average grass DM for the week was 20%.

Grazing Plan: The current AFC is 602 kg DM/ha (range 50 to 1200kg DM/ha). Average daily growth rate is 48 kg DM/ha this week. Between 30th May to 5th June, the average soil temperature at 100mm was 14.1 °C and 28.3 mm rain fell (rain data from the nearby Met Eireann station, Casement Aerodrome). Grass growth has increased slightly this week, and this is expected to continue whilst the favourable weather conditions remain, coupled with the paddocks that were cut for silage three weeks ago now moving into the second phase of growth. Post grazing heights of 4 to 5 cm were being achieved during the last week. This is becoming more of a challenge as grass has gone to seed. We have managed to avoid very strong covers (above 1600 kg DM/ha) by carrying out grass walks twice weekly and identifying surplus grass early, making the decision to take paddocks out for bales quickly where possible. Demand for grass is currently at 33 kg DM/ha. Another 2.53 ha (part of MP) were cut for silage during the week, weather permitting.



Lyons Systems Research Herd Notes

Milk Production: Average production from 30th May to 5th June was 28.2. kg/cow at 4.27 % fat, 3.47 % protein (2.18kg MS) and SCC was 57,000.

Breeding season 2022: On 3rd May, the breeding season began. It will continue for 12 weeks; 10 planned weeks with an additional 2 weeks, if necessary, based on scans. Breeding is done by AI and will be carried out twice daily. Bulls selected are:

FR6217	PINE-TREE LAWSON LARRY-ET
FR5076	PEAK MOTION-ET
FR5857	OLDCASTLETOWNN TIERNAN
FR6139	LISDUFF PERCEPTION
FR5668	PEAK CHILTON-ET
FR6061	MUNTA MYSTIC
FR4573	VH PRASER
FR7533	BOMAZ EPISODE-ET
FR7359	MOORABBY NAVAJO
FR7923	TOBERMARTIN FRANCIS

The weighted EBI averages of the bulls are:

	EBI €	Milk SI	Fert SI	Health €	Milk kg	Fat kg	Prot kg	F+P kg	F%	P%
Bulls	285	123	104	22	392	24	19	43	0.14	0.09
Calves 2023	255	101	98	16	293	19	15	34	0.13	0.09

These bulls were selected for high milk fat and protein milk PTA to ensure the milk fat and protein % stay positive in addition to selecting for a good health and high fertility sub-index values. Ten bulls were selected to increase bull team reliability. Heat detection is being done using automated activity monitoring and scratch cards which will be read in the collecting yard.

In the fifth week of the breeding season, no cows were submitted for first service, and there were 3 repeat serves. The 3-week (3rd -23rd May) submission rate is 88%, whilst the 24-day submission rate (3rd to 26th May) is 93 %.