



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 11/07/2022

Farm Details:

Area available: 17.43 ha
Current Stocking Rate (MP): 3.27
Farm Cover: 662 kg DM/ha
Cover LU/ha: 202
Growth Rate: 72kg DM/ha/day
Demand: 56kg DM/ha/day
Average Concentrate Supplement: 3.5kg/day
Average DIM: 142 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 21.5%.

Grazing Plan: The current AFC is 662 kg DM/ha (range 50 to 1500kg DM/ha). Average daily growth rate is 72 kg DM/ha this week. From the 4th to 10th July, the average soil temperature at 100mm was 19.4 °C and 1.6 mm of rain fell (rain data from the nearby Met Eireann station, Casement Aerodrome). Grass growth has stayed steady from last week. Grass growth is predicted to take a dip with a prolonged dry spell forecast for the coming 2 weeks. Even with the dry conditions grass is stressed and paddocks of low covers (500-1000kg DM/ha) have become steamy. It has been a challenging season to date to maintain grass quality with the peaks and troughs in growth rates. Two paddocks were taken for surplus bales last week. Both paddocks had a cover of 2080 and 2200 respectfully. The risk of drought conditions in the coming weeks has meant that paddocks that would typically be taken out for surplus silage will have to be grazed. This will have a knock-on effect on grass quality, however poorer quality grass is still nutritionally better than good quality silage in the diet. Demand for grass is currently at 56 kg DM/ha.

Milk Production: Average production from 4th to 10th July was 24.2 kg/cow at 3.9 % fat, 3.47 % protein (1.78 kg MS) and SCC was 40,000. Milk production from this time last year was 27.2.0 kg/cow at 4.26% fat, 3.65% protein (2.15 kg MS) and SCC was 39,000. Two cows are currently being treated for mastitis.

Breeding season 2022: On 3rd May, the breeding season began. Today, 11th July is the last day. We carried out 10 weeks out breeding this year.



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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	

Breeding is done by AI and is 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.