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 2/05/2022

Farm Details:
Area available: 17.43 ha
Current Stocking Rate (MP): 2.98
Farm Cover: 651 kg DM/ha
Growth Rate: 58 kg DM/ha/day
Demand: 52kg DM/ha/day
Average Concentrate Supplement: 7.6 kg/head/day
Average DIM: 76 days

Current Daily Feed Budget: Cows are being fed on average 7.6 kg of a 14% crude protein concentrate in the parlour which is formulated with native ingredients. Cows at 60 - 89 DIM are on 7.5 kg (45/53 cows) and cows <60 DIM on 8 kg (8/53 cows). Cows are being allocated 17 kg DM grass.

Spring Grazing Plan: The current AFC is 582 kg DM/ha (range 100 to 1360kg DM/ha). Average daily growth rate is 58 kg DM/ha this week. Between 25[h] April and 1st May, the average soil temperature at 100mm was 8.7 °C and 23.7 mm rain fell (rain data from the nearby Met Eireann station, Casement Aerodrome). With the favourable conditions, growth has improved over the last week. A post grazing height of 4 to 5 cm is being achieved. Demand for grass is currently at 56kg DM/ha. Magic day was on 26th of May this year. Average grass DM for the week was 22.4 %.

Milk Production:
Average production from April 25th to May 1st was 35.34 kg/cow at 4.17 %fat, 3.57 % protein (2.63kg MS) and SCC was 85,000. Milk production from this time last year was 36.5 kg/cow at 4.17% fat, 3.45% protein (2.79 kg MS) and SCC was 45,000. Four cows were culled from the herd due chronic clinical mastitis caused by Staphylococcus aureus. Both local vets and vets from UCD School of Veterinary Medicine carried out comprehensive investigations into the problem and advised culling.

Breeding season 2022:

The breeding season will commence on 3rd May, for the duration of 12 weeks; 10 planned weeks with an additional 2 weeks, if necessary, based on scans. Breeding is done by AI and will be done twice a day. 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.

Pre-breed scans:

All cows received a pre-breeding examination in order to see that they were reproductively sound. Cows identified as having no observed heats and having no sign of cyclical activity on their ovaries, of which there were two, were put on a PRID program.