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 30/05/2022

Farm Details:
Area available: 14.9 ha
Current Stocking Rate (MP): 3.83
Farm Cover: 654 kg DM/ha
Cover LU/ha: 171
Growth Rate: 41 kg DM/ha/day
Demand: 65kg DM/ha/day
Average Concentrate Supplement: 6.3 kg/head/day
Average DIM: 104 days

Current Daily Feed Budget: Cows are 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 are offered 8kg/day (2/57 cows), cows at 61 - 90 DIM are offered 7.5kg/day (11/57 cows) and cows ≥91 DIM are offered 6kg/day (44/57 cows).

Grazing Plan: The current AFC is 654 kg DM/ha (range 100 to 1300kg DM/ha). Average daily growth rate is 41 kg DM/ha this week. Between 23rd May and 29th May, the average soil temperature at 100mm was 11.7 ºC and 6.4 mm rain fell (rain data from the nearby Met Eireann station, Casement Aerodrome). The 3 paddocks taken for silage two weeks ago as well as several paddocks grazed in the last week are in the early phase of growth leading to a lower growth rate. If rain falls during the week with the favourable weather conditions currently being experienced, coupled with stable soil temperatures in the teens, it is expected that growth rates will lift again as paddocks move 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 starts 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 65 kg DM/ha. Another 2.53 ha (part of MP) will be cut for silage during the coming days, weather permitting. Average grass DM for the week was 19%.

Milk Production: Average production from 23rd May to 29th May was 31.06 kg/cow at 4.05 % fat, 3.62 % protein (2.38kg MS) and SCC was 28,000. Milk production from this time last year was 32.90 kg/cow at 4.55% fat, 3.61% protein (2.69 kg MS) and SCC was 50,000.

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 fourth week of the breeding season, 5 cows were submitted for breeding (8.8% of breeding herd), and there were 3 repeat serves. At the end of the fourth week, 54 cows have been submitted for breeding (96% of breeding herd). The 3-week (3rd -23rd May) submission rate is 88%, whilst the 24-day submission rate (3rd to 26th May) is 93 %.