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 20/06/2022

Farm Details:
Area available: 17.43 ha
Current Stocking Rate (MP): 3.27
Farm Cover: 755 kg DM/ha
Cover LU/ha: 231
Growth Rate: 38 kg DM/ha/day
Demand: 56kg DM/ha/day
Average Concentrate Supplement: 4.4kg/day
Average DIM: 125 days

Current Daily Feed Budget: Cows are being fed on average 4.4 kg of a 14% crude protein concentrate in the parlour which is formulated with native ingredients. Cows at 61 - 90 DIM are offered 7.5kg/day (4/57 cows) and cows ≥91 DIM were offered 6kg/day (14/57 cows) and cows ≥121 DIM are offered 3.5kg/day (39/57 cows) Cows are also allocated 17kg of grass DM and grass DM is 21.4%.

Grazing Plan: The current AFC is 755 kg DM/ha (range 150 to 1800kg DM/ha). Average daily growth rate is 38 kg DM/ha this week. From the 13th June to 19th June, the average soil temperature at 100mm was 17.2 ºC and no rain fell (rain data from the nearby Met Eireann station, Casement Aerodrome). Grass growth has slowed this week. Post grazing heights of 5-6 cm are being achieved from heavy covers. This is a challenge as grass has gone to seed. Very strong covers (above 1600 kg DM/ha) have been grazed over the past week as it has been impossible to avoid. The risk of drought conditions in the coming weeks has meant that paddocks that would typically be taken out for surplus silage have had to be grazed. If rain does come grass growth should raise rapidly which will allow for surplus silage to be made. Without rain the growth rate is predicted to fall further. The quality of the grass isn't the best at the moment but it is better nutrition than silage in the diet. Demand for grass is currently at 56 kg DM/ha.

Milk Production: Average production from 13th May to 19th June was 27.49. kg/cow at 3.71 % fat, 3.66 % protein (2.03kg MS) and SCC was 59,000. Milk production from this time last year was 30.6 kg/cow at 4.48% fat, 3.66% protein (2.44 kg MS) and SCC was 32,000.

BCS: 57 cows were body condition scored on the 14th of June. 3/57 scored 2.5 (5%), while 1 heifer scored 3.5. (1.75%) All other cows scored between 2.75 and 3.25 (93%).

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 seventh week of the breeding season, 1 cow was submitted for first service, and there was 1 repeat serve. The 3-week (3rd -23rd May) submission rate is 88%, whilst the 24-day (3rd to 26th May) and the 42-day (3rd May to 13th June) submission rates are 93 % and 98 %, respectively.