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 http://www.ucd.ie/agfood/welcomemessage/systemsresearchherd/.

Lyons Systems Research Herd Notes Week 04-05-2020

Farm Details:
Area available: 15.61 ha (1.82 ha out for reseeding)
Current Stocking Rate (MP): 3.72
Farm Cover: 584 kg DM/ha
Growth Rate: 59 kg DM/ha/day
Demand: 59 kg DM/ha/day
Average Concentrate Supplement: 7.3 kg/head/day
Average DIM: 77 days

Current Daily Feed Budget: Cows are being allocated 16 kg DM of grass and an average of 7.3 kg of a high energy concentrate. Cows ≥90 DIM (16/59 cows) are on 6 kg, cows ≥60 DIM but <90 DIM are on 7.5 kg (37/59 cows) and cows <60 DIM on 8 kg (6/59 cows). The herd have been split into three groups with each group being offered on average 7.3kg of a 14% protein concentrate, a 12% protein native formulation concentrate or a 12% protein non-native concentrate in the parlour. These diets will be offered as part of our 2020 nutrition trial until the start of the final grazing rotation in October. Grass DM was 19.8%. Estimated grass intake was 15.2 kg DM/cow.

Spring Grazing Plan: The AFC on 4th May was 584kg DM/ha (range: 50-1458 kg DM/ha) with cover/LU of 157 kg/cow. For the month of April, the nearest weather station, Casement aerodrome, recorded 19.3.mm of rain. This is only 37% of the normal rainfall for the area. The milking platform needs some rainfall and with little rainfall forecast in the days ahead, we will keep an eye on soil moisture deficit and act on any potential grass shortage that may occur. There was 1.82ha of the milking platform sprayed off for reseeding on Monday the 27th of April. This reseeding will be carried out on 11th May. On Friday 1st May, 33 kg N/ha of KaN+S (protected urea plus Sulphur) was applied on the milking platform. To data we have applied 93 kg of N/ha, 8.94 kg P/ha and 32 kg K/ha on the milking platform.

Breeding season 2020: On May 5th, the breeding season began. It will last for 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 being used are FR4728 (Kilfeacle Pivotal), FR5593 (Oakglen Cosmic), FR4573 (VH Praser), FR4439 (Killalough Samir), FR5239 (Hanrahan Olympus), FR4785 (Glenaboy Ronald), FR4608 (Fly-Higher Mod Cade-Et), OPH (Olcastletown Phanthom), FR2314 (Gortcreen Sebastain), FR4686 (Mountdudley Joker) and FR5085 (Lars-Acres Super Nerd).

The weighted EBI averages of the bulls are:

EBI €	Milk SI	Fert SI	Calv €	Beef €	Maint €	Manag €	Health €	Milk kg	Fat kg	Prot kg	F+P kg	F%	P%
266	105	108	41	-7.9	3.6	4	12.1	244	20.8	14.2	35	0.19	0.1

These bulls were selected based on high milk production and components while maintaining high fertility. Eleven bulls were selected to increase bull team reliability. Heat detection is being done using Moo Monitors and scratch cards which will be read in the collecting yard.

Milk Production: Average production from 4th-10th May was 33.1 kg/cow. Based on milk recording on 23rd April, milk fat was 4.57%, protein was 3.46% at 2.79 kg MS and 40,000 SCC. Average milk production this time last year was 33.2 kg/cow at 4.2% fat and 3.5% protein (2.56 kg MS).