



## 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 <http://www.ucd.ie/agfood/welcomemessage/systemsresearchherd/>.

### Lyons Systems Research Herd Notes Week 15-06-2020

#### Farm Details:

Area available: 15.61 ha (1.82 ha out for reseeded)  
Current Stocking Rate (MP): 3.65  
Farm Cover: 549kg DM/ha  
Growth Rate: 40kg DM/ha/day  
Demand: 44kg DM/ha/day  
Average Concentrate Supplement: 6kg/head/day  
Average DIM: 120 days



**Current Daily Feed Budget:** With an increase in growth rates, cows are being allocated 12kg DM of grass, 6kg of grass silage DM and 6kg of a high energy concentrate. Usually the amount of concentrates each cow is provided with is based on DIM. However, due to the shortage in grass supply, all cows are being offered 6kg of concentrate regardless of DIM as a short-term strategy. This is 2kg less than last week due to increased grass growth rates. The herd have been split into three groups and are being offered a 14% protein concentrate, 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.

**Grazing Plan:** The AFC on 15<sup>th</sup> June was 549kg DM/ha (range: 75-1400 kg DM/ha) with cover/LU of 150kg DM/cow. There were higher levels of rainfall last week which helped to improve growth rates. Using data from the nearby Met Eireann weather station at Casement Aerodrome, 20.3mm of rain fell in the last week and this helped to reduce the SMD from 78mm on 7<sup>th</sup> June to 66mm on 15<sup>th</sup> June. The increased grass growth has led to the reduction of grass silage in the diet to 6kg DM. This will be provided until grass growth rates increase further. Current grazing rotation is 21 days.

**Milk Production:** The average milk production from 8<sup>th</sup>-14<sup>th</sup> June was 27.5 kg/cow at 4.78% milk fat, 3.43% protein, 2.28 kg MS and 66,000 SCC based on milk recording on 10<sup>th</sup> June. This milk fat% is far higher than what was recorded this week in 2018 and 2019 (3.84% and 4.17% respectively). The difference in diet used at the time of sampling may account for this. Average milk production this time last year was 29.7 kg/cow at 3.61% protein and 4.17% fat (2.29 kg MS) and SCC at 57,000.

**Breeding season 2020:** On 2nd May, the breeding season began. It will last for 12 weeks; 10 planned weeks with an additional 2 weeks, if necessary, based on scans. The three-week



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submission rate was 91% (49/54 cows in the breeding herd) and the 24-day submission rate (2<sup>nd</sup>-26<sup>th</sup> May) was 98% (53/54 cows in the breeding herd). In the 6th week of breeding (6th-12th June), three cows received a repeat serve. One of these cows were first served in week 2 and the other two were served in week 3. In total nine cows have received a second serve. One cow that was 56 DIM on 6th June was submitted for the first time in week 6. At a recent 30-day scan, 22 of 29 eligible cows were scanned pregnant.

	No. of cows submitted	Total % of breeding herd submitted
<b>Week 1</b>	15	28
<b>Week 2</b>	19	63
<b>Week 3</b>	15	91
<b>Week 4</b>	4	98
<b>Week 5</b>	0	98
<b>Week 6</b>	1	100
<b>Total</b>	<b>54</b>	<b>100</b>

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 scratch cards and Moo Monitors which are being read in the collecting yard.