



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 08/07/2019

Farm Details:

Area available: 15.42 ha (2.17 ha reseeding)
Current Stocking Rate (MP): 3.76 LU/ha
Farm Cover: 702 kg DM/ha
Cover/LU: 187 kg/LU
Growth Rate: 87 kg DM/ha/day
Demand: 68 kg DM/ha/day
Average Concentrate Supplement: 3.8 kg/hd/day
Average DIM: 139 days
Milking cows: 58



Current Daily Feed Budget: Cows are being allocated 18 kg DM of grass and an average of 3.8 kg of a high energy concentrate. From the beginning of the second rotation which began on the 2nd April, until the start of the last rotation, half of the group will be fed an 18% crude protein concentrate while the other half will be fed a 14% concentrate. Estimated grass intakes last week were 16.1 kg DM/hd/day.

Grassland: The current AFC is 702 kg DM/ha (range 59 to 1234 kg DM/ha). Average daily growth rate was 87 kg DM/ha this week and grass DM was 19% on average. There are a few paddocks that haven't been cut for surplus bales this year that have gone stemmy. With limited opportunities to take out paddocks for surplus bales, we may have to top some paddocks in the next fortnight. However, with SMD (soil moisture deficit) currently at 37mm on the 7th of July (up from 26mm on the 2nd of July) and with little rain forecast in the next 7 days, we will hold off from topping at this present time, as it could potentially impact regrowth.

Milk Production: Average production is currently 25.6 kg/cow at 3.9% fat and 3.45% protein (1.88 kg MS). SCC is 89,000. Fat, protein and SCC figures are based on milk recording results from the 3rd of July. Milk production from this time last year was 24.7 kg/cow at 3.86% fat and 3.56% protein (1.82 kg MS).



Breeding Season 2019: The breeding season started on Monday 29th of April and will continue for 12 weeks. The results so far are as follows in the table below. So far 19 cows have repeated.

	% of cows submitted
Week 1	42% (24/57)
Week 2	84% (48/57)
Week 3	95% (54/57)
Week 4	100% (57/57)

Breeding is all by A.I. and is being done twice daily. Bulls being used across the herd are as follows: FR4513 (Ballygown Albert), FR2460 (Nextgen PHC Eimer 557), FR2298 (Olcastletown Ronaldo), FR4600 (Clorane Dandyman), FR4481 (Monabrogue Ebony), OTS (Ballintosig Ring O), FR4378 (Monamore Riptide), FR5085 (Lars-Acres Super Nerd), FR4379 (Ballydehob Adam), FR2035 (Crefogue Spider), and FR4187 (Westcoast Persus).

The weighted EBI averages of these bulls are as follows:

EBI €	Milk S.I	Fert S.I	Calv €	Beef €	Maint €	Mmgt €	Hlth €	Milk kg	F kg	P kg	F+P kg	F%	P%
282	107	106	55	-7	3	8	10	235	18.2	15.4	33.6	0.15	0.13

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, scratch cards and crayons.