



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 <https://www.ucd.ie/agfood/about/lyonsresearchfarm/lyonsdairyherd/>

Lyons Systems Research Herd Notes Week 29/04/2019

Farm Details:

Area available: 17.53 ha
Current Stocking Rate (MP): 3.35 LU/ha
Farm Cover: 858 kg DM/ha
Growth Rate: 86 kg DM/ha/day
Demand: 57 kg DM/ha/day
Average Concentrate Supplement: 7.6 kg/hd/day
Average DIM: 69 days
Cows Calved: 59 (all calved)



Current Daily Feed Budget: Cows are being allocated 18 kg DM of grass and an average of 7.6 kg of a high energy concentrate (cows > 60 DIM on 7.5 kg, cows < 60 DIM on 8 kg and cows >90 DIM on 6kg). From now 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. This research is focussed on improving nitrogen efficiency and along with cow performance data, we will also look at pasture intakes and nitrogen excretion. Estimated grass intakes last week were 17.3 kg DM/hd/day.

Grassland: The current AFC is 858 kg DM/ha (range 64 to 1534 kg DM/ha). Average daily growth rate was 86 kg DM/ha this week and grass DM was 17.8% on average. We will do another grass walk on Friday to determine what paddocks, if any, to take out for surplus bales for early next week. This week the paddocks that are low in Phosphorus will receive 1 bags/ac of 18.6.12+S (22 kg N/ha; 7.3 kg P/ha; 14.6 kg K/ha) with the remaining paddocks will received 0.64 bag/ac (28.24 kg N/ha) of KaN+S. So far, this will bring the total average fertiliser spread on the milking platform to 106 kg N/ha, 10 kg P/ha and 20.1 kg K/ha. We will begin the 3rd rotation on Monday the 29th of April.

Milk Production: Average production is currently 32.9 kg/cow at 3.91% fat and 3.49% protein (2.44 kg MS). SCC is 82,000., protein and SCC figures are based on milk recording results from the 16th of April. Milk production from this time last year was 30.9 kg/cow at 4.0% fat and 3.3% protein (2.45 kg MS).

BCS: Average BCS of the milking cows on Friday the 26th of April was 2.86 with 13.6% (8/59) having a BCS of ≤ 2.5 and 6.8% (4/59) having a BCS ≥ 3.5 . Currently there are 17 milking cows on OAD (once a day) milking. These cows were thin (BCS ≤ 2.5) in the current lactation



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and the current plan is to continue milking these cows OAD until after we complete 6 weeks of breeding.

Breeding Season 2019: The breeding season will start on Monday 29th of April and will continue for 12 weeks. 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. with scratch cards and crayons being read in the collecting yard.

Pre-breeding scanning: A second pre-breeding scans took place on Friday the 26th of April to check cows for endometritis (“whites”), cyclicity and cystic ovarian disease. 3/12 of the cows that were scanned have been treated for endometritis with a combination of prostaglandin and metricure. 5/59 cows are being treated for non-cycling or not seen in heat within the last 21 days (commencing Monday 29th of April) with 7-day CIDR program.