



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 15/04/2019

Farm Details:

Area available: 17.53 ha
Current Stocking Rate (MP): 3.37 LU/ha
Farm Cover: 738 kg DM/ha
Growth Rate: 54 kg DM/ha/day
Demand: 53 kg DM/ha/day
Average Concentrate Supplement: 7.7 kg/hd/day
Average DIM: 56 days
Cows Calved: 59



Current Daily Feed Budget: Cows are being allocated 16 kg DM of grass and an average of 7.7 kg of a high energy concentrate (cows > 60 DIM on 7.5 kg, cows < 60 DIM on 8 kg). 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 14.6 kg DM/hd.

Grassland: The current AFC is 738 kg DM/ha (range 75 to 1647 kg DM/ha). Average daily growth rate was 54 kg DM/ha this week and grass DM was 18.4% on average. So far, the milking platform has received on average 80 kg N/ha, 7 kg P/ha and 14.1 kg K/ha. The next round of fertiliser application is due the 3rd week in April.

Milk Production: Milk Production: Average production is currently 33.3 kg/cow at 3.76% fat and 3.49% protein (2.41 kg MS). SCC is 205,000., protein and SCC figures are based on milk recording results from the 10th of April. Milk production from this time last year was 29.34 kg/cow at 4.66% fat and 3.28% protein (2.33 kg MS). SCC is 78,000

BCS: Average BCS of the milking

cows on 12/4/19 was 2.94 with 11.9% (7/59) having a BCS of ≤ 2.5 and 6.8% (5/59) having a BCS ≥ 3.5 . Currently there are 17 milking cows on OAD (once a day) milking. These cow's were thin (BCS ≤ 2.5) in the current lactation and the current plan is to continue milking these cows OAD until after we complete 6 weeks of breeding.



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Calving 2019: On Thursday the 11th of April the last cow calved. In total the calving season lasted 10 weeks and 2 days from when the first cow calved on the 29th of January. Our average calving interval was 373 days and average gestation length was 277 days. Calving interval calculates at 373 days as last year we made the decision to move mating start date from the second last Monday in April to the last Monday in April for the first time. We had 50% of the herd calved by the 15th of February. There were 3 cases of milk fever (5% of the herd) and 2 cows retained their placentas (3.3%).

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 E.B.I 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 and scratch cards, with scratch cards being read in the collecting yard.

Bloat: Last Wednesday the 10th of April we lost a cow with bloat. A post mortem was carried out revealing frothy bloat with ingestion of clover suspected to be the origin. To prevent any more cases of bloat we are allocating grass on a 12hrs block. The idea is to prohibit a feeding frenzy and too slow the rate of consumption on grass only paddocks and to limit the cow's ability to select clover and force them to graze grass and clover. During periods of wet weather or when cows go from a paddock from 0% clover to heavy clover, we will allocate 6hrs grazing.