



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 06-07-2020

Farm Details:

Area available: 14.55 ha (1.82 ha out for reseeded)
Current Stocking Rate (MP): 3.65
Farm Cover: 644kg DM/ha
Growth Rate: 82kg DM/ha/day
Demand: 66kg DM/ha/day
Average Concentrate Supplement: 3.7kg/head/day
Average DIM: 141 days



Current Daily Feed Budget: With an increase in growth rates, cows are once again being offered concentrates based on their DIM. Usually, cows that are >90 DIM (1/57 cows) are offered 7.5kg, cows that are 91-120 DIM (4/57 cows) are offered 6kg and cows >120 DIM (51/57 cows) are offered 3.5kg per day. During the recent drought period, each cow was offered on average 40kg extra of concentrates than what was budgeted due to a lack of grass growth. From 10th July, cows will be provided 1kg less per day than what they usually would be offered to offset the increased amount of concentrates that were fed during the drought period. Therefore, cows are receiving on average 3.7kg of concentrates each day. 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 6th July was 644kg DM/ha (range: 50-1514 kg DM/ha) with cover/LU of 176kg DM/cow. The increasing covers and growth rates are the result of recent rainfall. Using data from the nearby Met Eireann weather station at Casement Aerodrome, 29.7mm of rain fell in the last week. SMD has decreased from 32mm (29th June) to 14mm (5th July). One paddock (1.06 ha) is due to be mowed for bales on Tuesday 7th July. Current grazing rotation is set at 20 days.

Milk Production: The average milk production from 28th June-5th July was 27.8 kg/cow at 4.07% milk fat, 3.57% protein, 2.13 kg MS and 80,000 SCC based on milk recording on 2nd July. Average milk production this time last year was 25.6 kg/cow at 3.9% fat, 3.45% protein (1.88 kg MS) and SCC at 89,000.

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 (2nd-26th May) was 98% (53/54 cows in the breeding herd). In the 9th week of breeding (27th June-3rd July), one cow received a third serve. At a recent 30-day scan, 48 of 49 eligible cows were scanned pregnant (98%). Of these, 18 are confirmed at 60 days.

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

As all cows have been inseminated with dairy bulls during the first 6 weeks of the breeding season, selected beef bulls will now be used for the remainder of the breeding season. The beef bulls that will be used are AU4309 (Deerpark Kevin), AU4563 (Johnstown Loyd 1039), AA4235 (Gabriel Mossy 1727), LM2014 (Ewdenvale Ivor) and BB4286 (Ideal De Petit Waret).

The weighted DBI averages (May 2020 evaluation) of the beef bulls are:

DBI €	Calving €	Beef €	Gestation Length PTA	Carcass Weight PTA
120	10	110	-0.37	18.7

Heat detection is being done using scratch cards and Moo Monitors which are being read in the collecting yard.

BCS: On 1st July, 55 cows were assessed for BCS. Average BCS of the milking herd was 2.99 with 5.5% (3/55) with a BCS of ≤ 2.5 and 7.3% (4/55) with a BCS ≥ 3.5.