



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 22-06-2020

Farm Details:

Area available: 15.61 ha (1.82 ha out for reseeded)
Current Stocking Rate (MP): 4.44
Farm Cover: 803kg DM/ha
Growth Rate: 112kg DM/ha/day
Demand: 75kg DM/ha/day
Average Concentrate Supplement: 5.1kg/head/day
Average DIM: 127 days



Current Daily Feed Budget: With an increase in growth rates, cows are being allocated 17kg DM of grass, and 6kg of a high energy concentrate. For the last number of weeks, all cows have been offered 6kg of concentrate regardless of DIM as a short-term strategy to the shortage in grass. As grass cover and growth rates have improved, this diet will continue until Friday 26th June when cows will be offered concentrates based on their DIM once again. Cows that are >90 DIM (3/57 cows) will be offered 7.5kg, cows that are 91-120 DIM (6/57 cows) will be offered 6kg and cows >120 DIM (48/57 cows) will be offered 3.5kg. Therefore, from Friday the cows will be receiving on average 3.97kg of concentrates. 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 22nd June was 803kg DM/ha (range: 307-1385 kg DM/ha) with cover/LU of 181kg DM/cow. The increased covers and high growth rates are the result of much needed high rainfall in the last week. Using data from the nearby Met Eireann weather station at Casement Aerodrome, 43.3mm of rain fell in the last week. This has also led to a large decrease in the SMD from 66mm on 15th June to 35mm on 22nd June. The increased grass growth means that silage can be removed from the diet. Due to poorer quality grass due to drought conditions, three paddocks (2.77 ha) will be mowed for bales this Sunday or Monday depending on weather conditions. Current grazing rotation is 21 days.



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Milk Production: The average milk production from 15th-21st June was 27.6 kg/cow at 4.54% milk fat, 3.49% protein, 2.22 kg MS and 30,000 SCC based on milk recording on 18th June. Average milk production this time last year was 28.4 kg/cow at 3.76% fat, 3.54% protein (2.07 kg MS) and SCC at 49,000.

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 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 7th week of breeding (13th-19th June), one cow that was first served in week 4 received a repeat serve. At a recent 30-day scan, 37 of 40 eligible cows were scanned pregnant (92.5%).

	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 are 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.