



## 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 20-07-2020

#### Farm Details:

Area available: 15.38 ha  
Current Stocking Rate (MP): 3.71  
Farm Cover: 591kg DM/ha  
Growth Rate: 59kg DM/ha/day  
Demand: 67kg DM/ha/day  
Average Concentrate Supplement: 2.7kg/head/day  
Average DIM: 155 days



**Current Daily Feed Budget:** The herd are being allocated 18kg DM of grass per day with an average 2.7kg of concentrate based on their DIM. Cows that are 91-120 DIM (4/57 cows) will be offered 5kg and cows >120 DIM (53/57 cows) will be offered 2.5kg per day. During the recent drought period, each cow was offered on average 40kg of concentrates more than planned. Thus currently, cows will be offered 1kg of concentrates less than planned per day to offset the increased amount of concentrates used during the drought period. Therefore, cows are receiving on average 2.7kg 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 20<sup>th</sup> July was 591kg DM/ha (range: 50-1704 kg DM/ha) with cover/LU of 159kg DM/cow. The target pre-grazing cover for the reseed is around 1000kg DM/ha. We will continue to graze at this pre-grazing cover until the end of the year in order to help the clover established in the sward. Last week we spread 37.7 kg N/ha in the form of 46% protected urea. To date the milking platform has received 167 kg N/ha. All Nitrogen spread on the milking platform has come from protected Urea. We plan to spread 2 more rounds of Nitrogen in mid-August and in mid-September prior to the closing date.

**Milk Production:** The average milk production from 13<sup>th</sup>-19<sup>th</sup> July was 25.0 kg/cow at 4.10% milk fat, 3.43% protein, 1.88 kg MS and 56,000 SCC based on milk recording on 15<sup>th</sup> July. Average milk production this time last year was 25.6 kg/cow at 4.16% fat, 3.67% protein (2.00 kg MS) and SCC at 218,000.

**Breeding season 2020:** The breeding season began on the 2<sup>nd</sup> May and finished on the 10<sup>th</sup> July, lasting for 10 weeks. The 21-day submission rate was 91% (49/54 cows in the breeding herd) and the 24-day submission rate (2<sup>nd</sup>-26<sup>th</sup> May) was 98% (53/54 cows in the breeding



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herd). Based on our 30-day scan, 41 cows have been confirmed pregnant to the 1<sup>st</sup> serve (76% of the herd; 41/54). There were 13 cows that received a 2<sup>nd</sup> serve, 1 of which cows repeated for a 3<sup>rd</sup> time. In total, 91% of the breeding herd (49/54 cows) were confirmed in calf in the first six weeks of breeding, based on a 30-day scan. We will continue to scan cows based on 30- and 60-days post A.I in the coming weeks with a final scan of the whole herd in early October.