



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 01/12/2019

Farm Details:

Area available: 17.53 ha

Average Concentrate Supplement: 3 kg/hd/day

Average DIM: 286 days

Milking cows: 45 (13 dried off)



Current Daily Feed Budget: Cows are being allocated 16 kg DM silage and 3 kg of a high energy concentrate. Since the 7th October all cows are being fed an 18% crude protein concentrate.

Grassland: The final grass cover for 2019 was conducted on Monday the 2nd of December. The current AFC is 594 kg DM/ha (range 222 to 1008 kg DM/ha). Average daily growth rate was 6 kg DM/ha since the 5th of November. For this area, 5-year average for grass growth from the 1st of December to the 1st of February was 6 kg DM/ha. If this was achieved it would give an opening farm cover on the 1st of February 2020 of 960 kg DM/ha which is on target for our stocking rate next spring.

Milk Production: Average production is currently 14.9 kg/cow at 5.02% fat and 3.79% protein (1.31 kg MS). SCC is 110,000. Fat, protein and SCC figures are based on milk recording results from the 26th of November. Milk production from this time last year was 14.4 kg/cow at 5.03% fat and 3.92% protein (1.24 kg MS).

Drying off: Any cows with an average weekly yield of below 9 kg/day, or within 60 days of expected calving date are dried off (13/58). When dried off, they are being fed 8.1 kg DM of third cut silage (64 DMD) and 150 g of dry cow minerals. An assessment carried out by the Veterinary Herd Health team identified 41 cows (71% of the herd) as requiring antibiotic dry cow therapy. The first main batch of cows (12/58) were dried off on Tuesday 3rd December, all of which received antibiotic dry cow therapy. Drying off will continue on a weekly basis using the aforementioned criteria and recommendations from the Veterinary Herd Health team. Three cows were identified as being a source of contagious bacteria and were recommended for culling to prevent the spread of mastitis within the herd.



Silage quality results 2019

Cut	1 st cut	2 nd cut	3 rd cut
DM (%)	26.1	19.6	34
CP (% DM)	16.3	15.4	14.5
DMD (% DM)	78.0	73.4	65.6
ME (MJ/kg)	11.8	11.1	9.8
NDF (% DM)	48	50.2	47.7
UFL	0.89	0.83	0.73
FIM intake (g/kg)	87.8	93.6	104