



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) 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 and sustainable when built on a foundation of good grassland management and meeting both milk and fertility targets and has a place in the 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 19-07-2021

Farm Details:

Area available: 17.43ha
Current Stocking Rate (MP): 3.27 LU/ha
Cover/LU: 278kg DM/LU
Farm Cover: 908kg DM/ha
Growth Rate: 70kg DM/ha/day
Demand: 59kg DM/ha/day
Average Concentrate Supplement: 3kg/head/day
Average DIM: 146 days

Current Daily Feed Budget: Usually the amount of concentrates each cow is provided with is based on DIM. However, all cows have been offered 3kg of concentrate since 16th July regardless of DIM as a short-term strategy to compensate for the higher levels of concentrates that were provided in recent weeks due to low grass growth rates. Cows are being offered one of four experimental concentrates; a 14% protein concentrate with non-native ingredients, a 12% protein concentrate with non-native ingredients, a 12% protein concentrate with native ingredients or a 12% protein concentrate with native ingredients supplemented with methionine. These diets will be offered as part of our 2021 nutrition trial until the start of the final grazing rotation in October. Cows are allocated 18kg of grass DM and grass DM is currently 22.1%.

Grazing Plan: The current AFC is 908kg DM/ha (range 113 – 1753kg DM/ha), cover/LU is 278kg DM and growth is at 70kg DM/ha/day. As daytime temperatures are in the high 20s this week, cows will be kept indoors for a period after morning milking and will be observed frequently during the day for signs of heat stress.

Milk Production: Average production from 12th – 18th July was 27.3 kg/cow at 3.69% milk fat, 3.81% protein, 2.05kg MS and SCC was 55,000. Milk production from this time last year was 25.0 kg/cow at 4.10% milk fat, 3.43% protein, 1.88 kg MS and SCC was 56,000.

Breeding season 2021: The breeding season began on the 1st May and finished on 9th July, lasting for 10 weeks. The 21-day submission rate was 98% (54/55 cows in the breeding herd). Based on our most recent 30-day scan, 48/55, 87% of the breeding herd have been confirmed pregnant in the first six weeks of breeding based on a 30-day scan. 39 of these held to the 1st serve (72%). There were 14 cows that received a 2nd serve, one of which cows repeated for a



Lyons Systems Research Herd Notes

3rd time. 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.