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 Starting 09/03/2020

Farm Details:
Area available: 17.52 ha
Turnout: 6th February
Current Stocking Rate (MP): 3.03
Farm Cover: 1067 kg DM/ha
Growth Rate: 13 kg DM/ha/day
Demand: 42 kg DM/ha/day
Average Concentrate Supplement: 7.8 kg/head/day
Average DIM: 28 days
Cows Calved: 53 (out of 60)

Current Daily Feed Budget: Cows are being fed 8 kg of an 18% crude protein concentrate in the parlour (this is built up gradually over two weeks post-calving) and being allocated 14 kg DM of grass. Cows are also receiving 4kg DM of grass silage at 9pm. Grass DM was 16.1% on average last week (2nd-7th March). Cows are on 16kg DM of 2nd cut silage while being housed indoors full-time.

Spring Grazing Plan: The current AFC is 1067 kg DM/ha (range 145-1888 kg DM/ha). Average daily growth rate is 13 kg DM/ha this week. There is 25.5% of the farm grazed, with the aim of having 50% grazed by 17th March. The current pre-grazing yield is 1034 kg DM/ha. Grazing this spring has been challenging due to the wet weather. The accumulated rainfall level in February was 155.4mm which is far higher than the average for 2017-2019 (37.2mm). Average soil temperature (at 100 mm) this week was 5.5°c. We only achieved 4-day grazings in February. From 2nd-11th March, cows were out by day and returned indoors at 9pm each night. From 12th March, cows will be housed indoors due to poor ground conditions until weather conditions improve.

EBI: The most recent (January 2020) genetic evaluation of the herd is as follows:

EBI €	Milk S.I	Fert S.I	Calv €	Beef €	Maint €	Mmgt €	Hlth €
206	69	87	43	-9	8	5	3
	Milk kg	**F kg**	**P kg**	**F%**	**P%**	**Calv Int**	**Surv %**

	140	13	9	0.14	0.08	-4.1	2.9

Calving: Calving started on the 24th January and there is currently 53 (of 60) or 88% of the cows calved.

Milk Production: The average milk production from 4th-10th March was 31.4 kg/cow at 4.6% fat and 3.3% protein (2.3kg MS). SCC is 62,400. Fat, protein and SCC figures are based on milk recording results from 27th February.

BCS: BCS of the herd was last assessed on 12th March. The average BCS of the milking cows (53/60) was 2.93. The percentage of cows with BCS ≤ 2.5 was 7.7 (4/53) while 1.9% of the cows had a BCS ≥ 3.5 (1/53). In total, 2 thin milking cows are going to be milked once per day until BCS improves.

Herd Health: In recent weeks, 3 cows from the milking herd displayed symptoms of Mortellaro (digital dermatitis). The hooves of these cows were trimmed. The herd are treated with a foot bath every two weeks for two consecutive days with a 5% concentration of copper sulphate (Bluestone). To date, three cows have developed further health issues. One cow developed pneumonia which was believed to be a consequence of a previous lungworm issue. This cow was treated by a vet with steroids and is currently being housed indoors in isolation from the rest of the herd. Another cow developed left displaced abomasum (LDA) and had an operation to correct this. This cow was provided with a glycerol-based oral dose at a rate of 200ml for 4 days and steroids after this operation. A cow was diagnosed with milk fever and calcium was administered intravenously and intramuscularly once. This cow received a calcium bolus three hours after the initial intervention and received another bolus 24 hours after this. The cows with LDA and milk fever are poorly conditioned and are a part of the cohort who are being milked once a day.