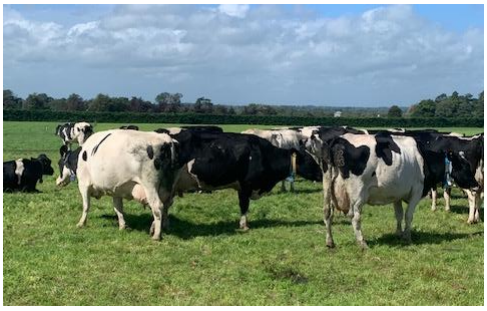
**Background:** It is widely recognised that grass-based systems offer a competitive advantage and will predominate in Ireland. However, grazing systems that have been developed to utilise large quantities of grazed grass have in the main been based on low-output per cow. In this scenario, high levels 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 31-08-2020**



**Farm Details:**
Area available: 17.43 ha
Current Stocking Rate (MP): 3.27
Farm Cover: 985kg DM/ha
Growth Rate: 83kg DM/ha/day
Demand: 65kg DM/ha/day
Average Concentrate Supplement: 1kg/head/day
Average DIM: 197 days

**Current Daily Feed Budget:** All cows are being offered 1kg per day to counteract the increased amount of concentrates fed earlier this summer during a drought period. The herd has 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. The herd is also being allocated 20kg DM of grass per day.

**Grazing Plan**: The AFC on 31st August was 985kg DM/ha (range: 285-1750kg DM/ha) with a cover/LU of 301kg DM/cow. We are aiming for a cover of 280 kg DM/cow so currently we are slightly ahead of target. Rotation length is set at 30 days in line with the Teagasc autumn grazing targets. To date, 10.6 tonnes of DM/ha have been grown.

**Fertiliser:** On 27th August, 39.6kg N/ha were spread on the grazing platform. To date, 206.2kg N/ha, 14.6kg P/ha and 84.7 kg K/ha has been spread so far this year.

**Milk Production:** The average milk production from 24th-30th August was 22.5 kg/cow at 4.78% milk fat, 3.66% protein, 1.90 kg MS and 76,000 SCC based on milk recording on 27th August. Average milk production this time last year was 21.3 kg/cow at 4.82% fat, 3.69% protein (1.83 kg MS) and SCC at 76,000. Currently, the predicted 305-day predicted milk and milk solids yield per cow are 7919kg and 634kg respectively.

**EBI:** The most recent (August 2020) genetic evaluation of the herd is below. The herd are within the top 1% for the herd EBI and milk SI and within the top 5% for the fertility SI.

| **EBI €** | **Milk S.I.** | **Fert S.I.** | **Calv €** | **Beef €** | **Maint €** | **Mgmt €** | **Hlth €** |
|---|---|---|---|---|---|---|---|
| 201 | 69 | 83 | 42 | -9 | 8 | 3 | 5 |
| **Milk kg** | **Fat kg** | **Prot kg** | **F%** | **P%** | **Calv Int** | **Surv%** | |
| 148 | 13.6 | 9.3 | 0.13 | 0.07 | -3.9 | 2.7 | |