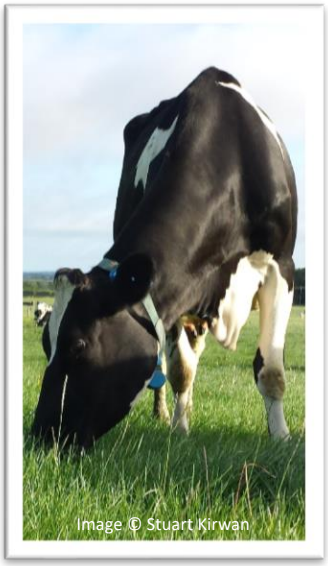
Background: It is widely recognised that grass-based systems offer a competitive advantage and will predominate in Ireland. However, grazing systems that have been developed to utilise large quantities of grazed grass have in the main been based on low-output per cow. In this scenario, high levels of 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 13-08-2018



Farm Details:
Area available: 16.09 ha (1.56 removed for reseeding)
Current Stocking Rate (MP): 3.73 cows/ha
Farm Cover: 639 kg DM
Growth Rate: 26 kg DM/ha/day
Demand: 37 kg DM/ha/day
Average Concentrate Supplement: 5 kg/head/day in parlour and 4 kg/head/day in the partial TMR
Average DIM: 178.5
Cows Milking: 60

Daily Feed Budget: Cows are being allocated 10 kg DM of grass and are being offered a partial TMR consisting of 15 kg fresh weight of maize silage (4.8 kg DM), 4 kg of beet pulp (3.52 kg DM) and 5 kg of a 18% protein in-parlour concentrate.

Grazing Plan: AFC on the 13th of August was 639 kg DM/ha (range 100 to 1303 kg DM/ha) with a cover/LU of 171 kg DM. Average grass growth was 26 kg DM/ha/day last week, on Friday grass that has grown was visibly wilting again. There is still a soil moisture deficit of approximately 74 mm in the region, however we received a very welcome 17.2 mm of rain on the farm over the weekend, so growth is expected to pick up further this week. Cows have resumed grazing full-time and are being allocated 10 kg DM of grass. They are being fed the partial TMR diet inside after morning milking. There is a lot of stem in paddocks and the grass has a high DM content (on average 24.7% DM last week). Despite this, paddocks are being grazed out reasonably well, only leaving stem behind. One paddock (1.25 ha) with a cover of 1308 kg DM/ha will be cut for baled silage today (Monday the 13th), it is being cut as it has a high stem content and presumably poor quality as a result.

Milk Production: Average production this week is 21.0 kg/cow/day, as of the week ending the 12th of August, at 4.71% fat and 3.67% protein (1.77 kg MS). Average production this time last year was 24.6 kg/cow/day, at 4.39% fat and 3.52% protein (2.0 kg MS). SCC is currently 123,000. Fat, protein and SCC figures are based on milk recording results from the 1st of August.

Breeding Season 2018: The breeding season started on Monday 30th of April and ended on the 22nd of July. Pregnancy scans are being done weekly at approximately 30 and 60 days

post A.I. Pre-breeding, 5/60 cows were culled for various reasons, including lameness, temperament and high SCC, therefore, only 55/60 cows were submitted for breeding. Submission rate in the first 3 weeks was 96% (53/55 cows) with all cows being submitted by week 5. Current scanning data indicates that conception rate to first service is 67% (37/55). Based on a 60-day scan, the 6-week in calf rate is 84% (46/55 cows). To date, 48/55 (87%) cows have been confirmed in calf from the first 7 weeks of breeding. Further scans will be completed over the coming weeks.

Reseeded paddocks: On the 5th of June, 1.56 ha of the MP was reseeded. However, due to the drought, grass did not emerge until last week and the paddock had become covered in weeds (predominantly Fat Hen (*Chenopodium album*)). Weeds will be removed today (Monday the 13th) using the zero-grazer and a post emergence spray will be applied when the grass is at the 3-leaf stage.