Nutrition plays a vital role in achieving good herd fertility. Quality of feeding in the dry period and early lactation can affect outcomes; therefore, many issues cannot be solved by just looking at the diet during the breeding season itself. However, it remains important to get some key targets right.

- **Body condition score (BCS) at breeding**
  
  BCS 3.0; milk yield 2.4kg MS/day; diet: 18kg high-quality grass plus 2kg 14% hi-energy nut, with Mg plus trace minerals included; EBI €184; clean and cycling.

  through additional feeding will be minimal.

- **High economic breeding index (EBI) cows**
  
  High EBI cows have been proven to maintain a better BCS across a range of diets, explaining in part why their fertility is better. Use high-EBI bulls to...
make feeding simpler in the long term.  
- **Energy intake** drives milk performance, maintains BCS, and improves fertility. Ensure that the herd is grazing the best-quality grass possible (see below). Supplement deficits in grass in good time.
- **Protein in the diet** is provided by high-quality pasture. This contains a high level of crude protein (nitrogen (N)) which milking cows use with feed energy to make milk protein. Surplus dietary N may elevate blood and milk urea levels and this may give rise to concerns on fertility. Under good management, bulk milk urea does not explain much of the difference in fertility between herds. Apply fertiliser N little and often during the breeding season. Do not overload fertiliser N under drought conditions, and feed high energy 14% crude protein rations at grass to control any risk.
- **Trace minerals** (copper, cobalt, iodine, selenium, manganese and zinc) can affect fertility if lacking in the diet. However, feeding these minerals above requirements is expensive and will not boost fertility where no deficiency exists. The ‘silver bullet’ of extra minerals will not fix the problems of thin cows, poor heat detection, or bad genetics.

**Breeding under Covid-19**

AI companies have been planning for weeks to limit/eliminate any potential effects of Covid-19 on the delivery of their AI services. It is very important that people don’t give up on AI in 2020 as a result of Covid-19 concerns and risk putting the future performance of their herd in jeopardy. A number of reasons for this are outlined below.

**High EBI AI bulls**

*Figure 1* shows that the EBI of first-calved heifers sired by genomically selected (GS) AI bulls is €30 greater than heifers sired by daughter-proven (DP) AI bulls, and €70 greater than heifers sired by stock bulls. As a rough rule of thumb for a crop of 20 heifers entering the parlour in 2020, the lifetime difference in expected profit for the daughters of the average GS sire and DP sire is €14,000 and €6,000 greater than the heifers calving this year that were sired by stock bulls (assuming that all heifer groups complete an average of five lactations).

**Selecting bulls for better beef calves**

Not every cow is worthy of a dairy AI straw and beef AI should be used in compact herds from

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**Table 1: Number of stock bulls per 100 cows for different scenarios.**

<table>
<thead>
<tr>
<th>Stock bulls introduced after:</th>
<th>Three:six week submission rate (number of cows left to be bred)</th>
<th>90%:100%</th>
<th>70%:90%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three weeks AI</td>
<td>Compact</td>
<td>2 (50)</td>
<td>3 (61)</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Six weeks AI</td>
<td>1 (22)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nine weeks AI</td>
<td>1 (10)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Assumptions: One stock bull per 25 cows is required with the balance of cows submitted in the following three weeks; 55% conception rate.
1,400 is the magic number

May is generally the month when grass growth reaches its peak for the year. So grass supply can change fast. How you respond to grass growth is key. Be alert to what is happening on the farm in terms of growth:

- every effort must be made to get cows to graze the “right” grass – 1,400kg DM/ha of leafy grass;
- keeping to a 20-day rotation is critical to maximise the performance of the herd – a growth rate of 65-70kg DM/ha/day for 20 days leads to 1,300-1,400kg DM/ha pre-grazing cover;
- a stocking rate of four cows/ha eating 17kg of grass DM/day (plus 2kg meal/cow) equals a demand of 68kg DM/ha/day; once growth rates are at 70kg DM/ha/day the system remains in balance; however once growth rates are above this level, then surplus grass begins to accumulate;
- for those who measure grass, the average farm cover should be at 160-180kg DM/cow; and,
- watch residuals (target 4cm) to make sure cows are cleaning paddocks but not being pinched on intake.

More AI = fewer stock bulls

One mature stock bull is needed for every 25-30 cows, while one yearling bull is needed for every 15-20 cows. When you increase the numbers of cows per bull, you increase the risk of infertility and the chances of work-induced lameness occurring.

The number of bulls required per 100 cows will depend on both the compactness of the herd’s calving pattern and the timing of stock bull introduction. The number of stock bulls required per 100 cows and heifers is presented in Table 1.

Each additional three weeks of AI completed will approximately halve the number of stock bulls required in total. If relying on a single bull, it is advisable to get him fertility tested before he’s put to work; however, this will only show that he is fertile on the day of the test. Remember that a bull can become sub-fertile at any stage during the season.
Monitoring SCCs

With the breeding season started or about to start for many of you, it is important not to forget about monitoring and controlling somatic cell counts (SCCs). While the current Covid-19 restrictions have led to the suspension of the technician milk recording service (eDIY milk recording is continuing), you should re-start milk recording once this service is resumed. This will allow you to get back on track for this season and to identify any problem cows that may be in the herd. In the meantime, make good use of your California Mastitis Test (CMT). A video showing the CMT procedure is available to watch on the Animal Health Ireland (AHI) website or at: https://youtu.be/cVeFTWN_mFw.

HEALTH & SAFETY

Your silage safety checks

May is a month when farming is all outdoors and preparation for silage making takes place. Health and safety related work includes checking silage pit walls, laying effluent pipes, and planning so that silage is not loaded too high. Good communication with your contractor is essential. Never allow children near to machinery at work. Regarding baled silage, stack safely; an information sheet ‘Working safely with bales on the farm’ is available at: www.hsa.ie. Ensure that visibility is good, particularly at public road junctions. Bollards or signs are not allowed on the surface of public roads. A Covid-19 article is available in the enclosed Today’s Farm issue.