Management of Dairy Cows from Calving until Mating Start Date

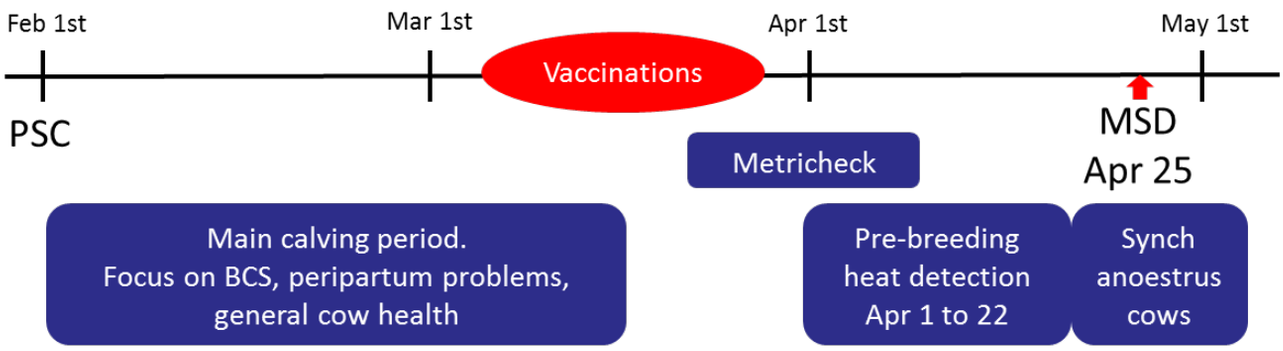
Background

Good fertility and compact calving are essential to maximise grass utilisation, and hence farm profit. The target is to have 90% of the herd calved within 42 days from the planned start of calving, and all cows calved by mating start date (MSD). For a 100 cow herd, increasing the 6 week calving rate (heifers and cows) from 70% to 90% is worth €16,500 per annum.

Key actions

- A timetable of important events for seasonal reproductive management is outlined in Figure 1 and discussed in the text that follows.

Figure 1: *Seasonal management of fertility. The example herd has a planned start of calving (PSC) of Feb 1st and a MSD of Apr 25th.*



- Cows should calve at a BCS of 3.00 or 3.25 and lose no more than 0.5 of a unit of BCS after calving.
  - Cows with low BCS at calving will have lower milk yield with reduced fat content and are more likely to have retained foetal membranes (RFM), a longer postpartum anoestrus period, increased likelihood of weak or silent heats, and poor response to synchronization.
  - Once a day milking can be used to improve energy status in early lactation, allow cows to retain (or regain) BCS, advance the interval to resumption of cyclicity and improve overall fertility performance. The reduction in milk solids increases as the duration of once a day milking increases. Imposing once a day milking for the first 21 days after calving would cause immediate and total lactation reductions in milk solids of 15% and 7%, respectively. The corresponding figures if once a day milking was imposed for the first 42 days after calving are 20% and 13%, respectively.

- The lactation diet should be balanced for minerals.
  - The main mineral deficiencies prevalent in Ireland are phosphorus, copper, selenium, iodine and zinc. Analyse the mineral composition of grass available for grazing every 2 to 3 years. Cows should be supplemented with minerals at the appropriate rate to complement the minerals supplied in the grazed grass. Collect blood samples from a subset of cows before the breeding season to ensure that herd mineral status is satisfactory.

- Intervene promptly to treat cows with metabolic disorders such as milk fever, ketosis and displaced abomasum.

- If foetal membranes are still present by 24 hours after calving, it is defined as a retained placenta. Retained placenta is a risk factor for developing metritis and endometritis.
  - oIt is not recommended to manually remove retained foetal membranes or routinely treat these cows with antibiotics, prostaglandin or oxytocin. Carefully monitor cows, and if a fever develops, treat with systemic antibiotics.

- Metritis is a systemic illness with a foul-smelling vaginal discharge occurring within 21 d after calving. Systemic antibiotics and anti-inflammatory drugs are generally required.

- Ensure that all vaccinations are conducted at the appropriate date relative to the MSD and in accordance with the manufacturers instructions.

- Starting 4 weeks before MSD, record vaginal discharge scores using the metricheck device on cows calved >14 days.
  - Cows calved >14 days and diagnosed with endometritis should be administered an intrauterine infusion of cephapirin (Metricure).

- Maintain detailed health records and be proactive in treating non-cycling cows before MSD.
  - Commence pre-breeding heat detection on April 1st. Implement a simple form of heat monitoring (e.g., tail paint with twice weekly checks) to identify non-cycling cows.
  - Use the Progesterone-Ovsynch synchronisation protocol (Figure 2) for cows calved >30 days that are still anoestrus on April 22nd. The cows will be bred at timed AI 10 days later during the first week of the breeding season. For animals with BCS ≥2.75, conception rates >50% have been achieved with this protocol.

Figure 2. *Progesterone-Ovsynch protocol for anoestrous cows. The protocol takes 10 days, and all cows are inseminated at the end of the protocol, regardless of signs of heat.*