Twice-a-day (TAD) feeding of milk replacer continues to remain the most widespread method of rearing calves on calf-to-beef operations. Although not suitable to every farm, once-a-day (OAD) feeding of milk replacer is another option available. However, a high degree of stockmanship is required to ensure that adequate performance is achieved and calves remain healthy.

Benefits of OAD feeding
- If carried out correctly, OAD feeding is a practice that can greatly reduce the labour required during the rearing period. Research conducted by Teagasc has shown no difference in the level of performance achieved by calves on OAD or TAD feeding. In addition, studies have pointed to a 25-36% reduction in the labour input required for OAD compared to TAD feeding systems.
- OAD compared with TAD feeding reduces the labour required for feed preparation and washing up.
- Milk replacer can be fed OAD with no differences in weight gain or scour incidence.
- Early rumen development is enhanced due to the increased consumption of concentrates/straw.
- Calves achieve higher dry matter intakes at an earlier age, possibly leading to two weeks earlier weaning.

Introducing once-a-day feeding:
- By law, calves must be fed at least twice daily.
- As calves are totally dependent on liquid feed for the first three weeks of life, OAD feeding should not commence before this point.
- From three weeks of age, Teagasc research has shown no differences in calf performance or health between feeding milk OAD or in two separate feeds.
- Waiting until 21 days provides the calf’s rumen with adequate time to develop and ensures sufficient volumes of concentrates and long fibre are being consumed.
- When calves are purchased, the introduction of OAD feeding should be delayed until the calves have settled, are consuming concentrates and are gaining weight.
- Only healthy calves should be transitioned to OAD feeding.

Best practice in OAD feeding
For calves transitioned to OAD feeding, they must be provided with ad-lib access to concentrates, long fibre and fresh, clean water at all times.
- Like TAD feeding, ensure all calves drink their daily allowance of milk.
- If OAD feeding is implemented, it is best practice to feed calves at the same time with milk replacer each day.
- It’s preferable to feed milk in the morning, as this will reduce disturbance and allow calves to settle down to concentrate feeding.
- Concentrates should also be fed at a time when milk is not being fed (if feeding milk in the morning then feed concentrate in the evening). This ensures compliance with EU legislation on twice daily feeding.
- It is important to continue to check calves twice daily in order to detect any potential problems such as scour etc.
- Being consistent on feeding time, temperature of the milk fed, concentration and volume offered as well as hygiene are of the utmost importance.
Mixing rates

- Calves are not under-fed when an OAD feeding protocol is correctly implemented; rather they receive their daily allocation of milk powder in one feed rather than two.
- Typically, for TAD systems, milk replacer is reconstituted at a rate of 125g of powder to 875ml of water to give one litre of mixed milk (12.5% solids) to be fed twice daily at a rate of 3L/feed.
- For OAD systems, the mixing rate may be gradually increased to 200g of powder to 800ml of water. At a feeding rate of 3.5-3.75L/day, this gives the mixed milk a solids content of 20%.
- Specifications and mixing rates can vary between products and it is essential to always follow the manufacturer’s recommendations.

Selecting a milk replacer

- Any good quality milk replacer can be fed OAD – check the label of the bag to see what ingredients and product specifications are given.
- A milk replacer which contains only a relatively high level of milk-derived proteins is preferable (skim milk powder or whey protein).
- A crude protein content of >20% and a fat content of 18-20% should be targeted.
- Milk replacers should have <0.15% crude fibre and the ash content should be <8%.

Weaning

Weaning a calf off milk replacer is always a critical operation. It is important to avoid any major change in growth at this stage.

- Successful weaning depends on having an average intake of 1kg of concentrate per head for three consecutive days before weaning.
- Calves fed on OAD systems typically have a higher intake of concentrates and may be weaned up to two weeks earlier without having a negative impact on performance. However, this is provided they are consuming adequate volumes of concentrates.
- Calves can be either abruptly or gradually weaned. The latter is when the amount of milk being fed is reduced over time (typically 7-10 days).
- Both methods of weaning can be performed successfully as long as the calf’s rumen is adequately developed and that they are eating adequate amounts of concentrates.

More information on the Teagasc Green Acres Programme can be found at Teagasc.ie and on AgriLand.ie.