

Section 7

Managing Weaning

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Introduction

Weaning breaks the maternal-offspring bond and removes milk from the calf's diet. This is stressful for the calf and happens at a time when other stress factors, e.g. change of environment (outdoors to indoor winter housing), change of forage diet (grazed grass and to conserved forage usually with concentrate supplementation), and transport/marketing may be encountered.

- ① Why is it so important to reduce weaning stress?
- ② What are the guiding principles for weaning management?
- ③ What are the main animal health risks at and post-weaning?
- ④ What are the key housing requirements for weaned calves?

Managing Weaning

① Why is it so important to reduce weaning stress?

Stress has a negative effect on the immune system, making calves more susceptible to disease. For the recently-weaned calf, susceptibility to pneumonia or bovine respiratory disease can be a particular problem.

② What are the guiding principles for weaning management?

Weaning procedure

Avoid abrupt weaning of all animals at the one time. Gradual weaning is better. Calves should be weaned in at least two separate groups with each cow group being removed at a minimum interval of five days.

Feeding concentrates pre-weaning.

Research at Teagasc Grange has shown that single-suckled beef calves supplemented with concentrates prior to weaning were less immune-compromised, started consuming meal faster when housed indoors, and spent more time lying down (rather than standing and walking) post-weaning compared with non-supplemented calves.

At pasture: Introduce concentrates one month prior to weaning and gradually increase the allowance with the intention of having the calf consuming one kg/day at weaning time. Continue to feed the concentrates for at least two weeks after weaning.

Indoors: Allow the calves access to cows in an adjacent pen and offer the calves forage *ad lib* while simultaneously increasing the concentrate allowance gradually over a two-week period to one kg/day. After this period, calves' access to cows can be ended.

Avoid additional stressors at weaning.

e.g. calves should be castrated at least four weeks prior to weaning date, or at least two weeks after the calf has been weaned.

There may also be advantages in delaying housing of recently weaned calves.

③ What are the main animal health risks at and post-weaning?

Weanling pneumonia

- Clinical signs: Early diagnosis is essential for treatment success and frequent observation is recommended post weaning and after housing. Initial signs of pneumonia can be non-specific for respiratory disease such as being 'off form', dullness, reduced feed intake and lack of gut-fill. Other signs may include fever (over 39.5 degrees C), increased respiratory rate, watery discharge from the nose and eyes. Later signs include purulent nasal discharge, and severe respiratory distress. By the time these are noted the disease is advanced. If you suspect weanling pneumonia consult your local veterinary practitioner for advice on diagnosis and treatment.
- Causes: Pneumonia is usually caused by a range of pathogens, both viral (Bovine Respiratory Syncytial Virus (BRSV), Bovine Parainfluenza 3 (BPI3), and Infectious Bovine Rhinotracheitis (IBR)) also known as (Bovine herpes virus 1 (BoHV-1)) and bacterial (*Pasteurella multocida*, *Mannheimia haemolytica*, *Histophilus somni*, *Mycoplasma bovis*). However, pneumonia is a classical multi-factorial disease, and it is the combination of these infectious agents with inappropriate management and husbandry factors that causes outbreaks of the disease. In addition the BVD virus can suppress the immune system and lead to pneumonia.
- Unfavourable environmental conditions and stress usually lead to viral infection of the lungs which is then followed by bacterial infection. Bacterial infection causes the main damage to the lungs which can be irreversible and lead to ill-thrift or death if treated too late or not long enough.

Treatment

- Preventing pneumonia by managing weaned calves as detailed above is preferable to treating outbreaks. Antibiotics are ineffective against viral infections. However, where bacterial involvement is suspected antibiotic treatment is required. Anti-inflammatory drugs may also be useful.

- The most important factor for treatment success is to start treatment very early in the course of the disease. The next most important factor is to ensure treatment is long enough – your veterinary practitioner will advise on the course of therapy required. They can also advise on the need to treat all animals within the group.
- Vaccinations: calves should be vaccinated where specific problems arise and according to label recommendations. Veterinary advice should be sought for a suitable vaccination programme and the widest protection will be achieved where the programme includes the three most common respiratory viruses ((BRSV), (BPI3), (IBR or BoHV-1)). Vaccinations help reduce the probability of disease but cannot solely be depended upon for prevention. The management system pre- and post-weaning will assist the successful outcomes of a bovine respiratory disease vaccination programme.

Other considerations

- A review of current housing and environment is recommended if there is a risk of weanling pneumonia.
- Isolation of individual sick animals is recommended.
- Plan a programme for purchasing weanlings where stress is minimised and where purchased groups are acclimatised outdoors or in open buildings before winter housing.

Stomach worms and hoose

Calves should be treated for stomach worms and hoose during the grazing season and for *Ostertagia* Type II worms at housing using effective anthelmintics administered according to product recommendations.

Calves with pre-damaged lungs from lungworm infestation also have a higher risk of developing pneumonia.

Grass tetany

Cows can be in danger of getting hypomagnesaemia (grass tetany) immediately after weaning as a result of stress. Feed calcined magnesite (60g/cow/day) for 4 to 5 days after weaning.



4 What are the key housing requirements for weaned calves?

- All houses should be adequately ventilated allowing for an adequate supply of fresh air thus prohibiting conditions for viral growth and spread, allowing heat dissipation and preventing the build-up of carbon dioxide, ammonia or slurry gases.
- Surfaces should be even and non-slip to avoid unnecessary underfoot conditions.
- There should be sufficient space for all animals to feed comfortably at the same time. The feed trough should be sufficiently large so that animals have adequate access to feed at all times.
- Housed stock should have freedom of movement and ample floor space for lying, grooming and normal animal to animal interactions. High stocking densities may have an adverse effect on growth rate, feed efficiency, carcass weight and behaviour (e.g. locomotion, resting, feeding and drinking).

Footnote

[The Animal Welfare, Recording and Breeding Scheme for Suckler Herds (Suckler Welfare Scheme) was introduced in 2008 in order to improve the standards of animal welfare and the breeding quality of animals in suckler herds. Central to this scheme is the requirement for adherence to “Appropriate Weaning Procedures”, based around feeding meal/ concentrates to the calf pre-weaning (and post-weaning), graduated weaning and, in situations where farmers sell weanlings, a time delay before calf sale. Refer to terms and conditions of the scheme at www.agriculture.gov.ie/farmerschemespayments/sucklerherdswelfare-scheme2008-2012/awrbs2010/]

