

Section 7

Biosecurity

by James O'Shaughnessy



Introduction

Biosecurity refers to practices used to prevent both the introduction of and spread of disease within a farm.

- ① What are the key principles in achieving good biosecurity?
- ② How do I reduce the risk of introducing disease onto my farm?
- ③ How should I manage an isolation facility?
- ④ What are the advantages and disadvantages of having cattle and sheep grazing together?

Biosecurity

1 What are the key principles in achieving good biosecurity?

- Develop a biosecurity plan with your veterinarian which is suited to your farm. Set goals which are realistic and achievable.
- Review your biosecurity plan annually.
- Isolate all animals on entering your farm (purchased/unsold animals/returning from shows) for 28 days and test for evidence of disease.
- Ensure farm visitors disinfect themselves on arrival (at farm entrance). Provide protective clothing and footwear for visitors to wear.
- Do not share equipment (trailers, slurry spreaders etc.) or animal products (milk, colostrum, slurry etc.) between farms.
- Keep other domestic and wildlife animals (including all vermin) away from feed bins, pasture and water sources.
- Use only piped water sources from a mains water supply.
- Maintain the boundary fence (3 metre double spaced cattle proof fence).

Checklist



To prevent disease entry

Directly by cattle

- Purchase of infected cattle.
- Cattle returning from shows or unsold at auction.
- Infected livestock entering your land or spread of disease from nose-to-nose contact from neighbouring cattle across a boundary fence.

Indirectly by cattle

- Indirectly through the use of contaminated equipment. For example, the sharing of livestock trailers/slurry spreaders/nose tongs etc. between farm.
- The sharing of milk or colostrum between farms. For example, the practice where some farmers source colostrum from their neighbouring farms to feed a newborn calf.

- Visitors entering your farm who are carrying faeces/urine/blood on their clothing/footwear who don't disinfect themselves on entering your farm.

Domestic/wildlife animals

- Contact with wild or domestic animals. For example, having a dog on farm with access to feed bins or where cattle graze can potentially introduce Neospora. Deer can be a source of Johne's disease, while sheep can be a source of leptospirosis, BVDv and Johne's disease.

Rivers/air

- Allowing livestock access to rivers/streams on farm can run the risk of introducing diseases such as salmonella, leptospirosis and Johne's disease.

2 How do I reduce the risk of introducing disease onto my farm?

- Maintain a closed herd. Do not buy in cattle if possible.
- Isolate all purchased animals on arrival at your farm for a minimum period of 28 days in your isolation facility. This also applies to animals returning from shows or unsold animals from auction. During this period, observe for clinical signs of disease and conduct any necessary tests and treatments.
- The boundary fence between your farm and the neighbouring farm should be double fenced. The gap between the fencing on your land and the neighbouring farm should be 3 metres wide. It must be cattle proof and must prevent nose-to-nose contact between cattle.
- Provide disposable clothing and footwear for all visitors. Ensure all visitors disinfect themselves at the entry point to your farm.
- Do not share equipment between your farm and neighbouring farms. This includes the sharing of slurry spreaders, livestock trailers, calf dehorning crates, nose tongs etc.

- Do not use colostrum, milk or slurry from neighbouring farms.
- Do not allow other domestic or wild animals (farm dogs, sheep, goats, deer etc.) access to the following: 1. feed bins/bunkers 2. pasture where cattle graze, and 3. water sources.
- Use only piped water sources from a mains water supply for your cattle. Do not allow cattle access to rivers/streams coursing through your farm.

Checklist



If I have to buy in cattle what are my purchase guidelines?

- Buy as few cattle as possible from as few sources as possible.
- Try to purchase young cattle only.
- Try to purchase cattle from accredited disease free herds. Failing this, purchase cattle from closed herds with strict biosecurity practices in place. If neither of the two herd types can be found, purchase cattle privately from small local herds, where the local veterinarian can provide all necessary information on that herd (disease history, results of laboratory screening etc.).

3 How do I manage livestock in the isolation facility?

- An isolation facility is a shed/paddock where all purchased cattle and cattle returning from show/sales are placed upon arrival at the farm.
- Ideally, it should be situated at the farm entrance.
- It must not be used as a shed to also house sick animals on the farm.
- If the isolation unit is a shed, it should be separate from other livestock sheds (no sharing of airspace under the same roof) and cattle in the isolation unit should be a minimum of three metres in away from other cattle on the farm.
- Livestock are quarantined in this isolation facility, generally for a minimum period of 28 days.

- The isolation unit should have its own animal handling facilities
- Any equipment used in this unit must remain in this unit, coupled with being washed and disinfected before and after use. For example, the isolation facility should have its own nose tongs, halters, buckets, thermometers etc.
- The unit should have separate storage facilities for dung/urine.

How do I manage livestock in the isolation facility?

- All purchased cattle or cattle returning from shows/sales should be monitored daily for signs of disease while in quarantine (minimum quarantine period of 28 days).
- As part of the daily farm routine, cattle in quarantine should only be tended to *after* all the other cattle on farm have been looked after.
- While in quarantine, cattle can be tested for various diseases (subject to your biosecurity plan).
- During the quarantine period, cattle can be vaccinated for diseases against which you are currently vaccinating your herd for and treated for parasites.

What diseases should I test my cattle for while in the isolation facility?

- The decision on which diseases to be tested for should be determined following consultation with your veterinarian. These will be incorporated into your biosecurity plan which your veterinarian will have drawn up.
- The diseases of interest in a beef herd should include some or all of the following; *Leptospirosis, BVD, IBR, Johne's disease, Neospora, Salmonella, Parasites, Digital Dermatitis, Ringworm and Genital Campylobacteriosis.*

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How do I test purchases for specific diseases?

- This should be decided in consultation with your local veterinarian.
- *BVD*.
Option 1. (better option). Only purchase animals which have been tested for BVD virus before purchase and keep these animals in isolation for 28 days post purchase
Option 2. Test purchases on arrival for BVD virus and keep in isolation for 28 days.
- *Leptospirosis* – Test purchases 28 days post arrival using a blood test Alternatively consider treating purchases with antibiotics only (discuss with vet.).
- *IBR* – Test purchases 28 days post arrival using a blood test for IBR antibody.
- *Johne's disease*– Test purchases using both a blood test and faecal sample (for culture). Performing faecal culture requires the animal to be in isolation for up to four months.
- *Neospora* – Breeding females should be tested on arrival for neospora using a blood test. As breeding females may test negative and still be carriers, strong consideration should be given to retesting these females during the dry period (4-10 weeks pre-calving).

④ What are the advantages and disadvantages of having cattle and sheep grazing together?

Advantages

- Sheep will graze parts of pasture (close to dung patches) and eat certain weeds that cattle will refuse to eat. This improves overall pasture quality.
- The main gastrointestinal worms that affect cattle do not affect sheep. Thus by grazing cattle and sheep together, there will be a dilution effect as the stocking density will be lower for cattle when they are co-grazed with sheep.

Disadvantages

- Sheep can act as a source of Johne's disease, BVD and leptospirosis. Therefore the grazing of cattle and sheep together can result in the spread of these diseases between the two species.

Therefore, although there are advantages of grazing cattle and sheep together with respect to pasture quality and parasite control, the overall advice is not to graze both species together (or house in the same building).

