

Preventing an Outbreak: Being Vigilant About Animal Introductions



proAction®'s biosecurity module emphasizes the importance of taking the necessary steps to reduce the impact disease may have on your operation if it is introduced. Identifying areas of risk through the use of **the biosecurity risk assessment questionnaire (RAQ)**, recording disease and death events, and developing a strategy for animal introductions, returning animals, and visitors will help to address the 3 key pillars of biosecurity:

EXCLUDE

Prevent the introduction of disease to a farm

Prevent the spread of disease within a farm

MANAGE

CONTAIN

Prevent the spread of disease to neighbouring farms or wildlife

What's the Risk?

Infectious diseases are present in Canadian dairy herds, and they can be incredibly costly. Moving animals between premises increases the risk of introducing a new disease into your herd. This is of particular importance on a dairy farm, where there are vulnerable populations such as pregnant, fresh, and young animals. You should ask yourself:

- What is the risk of bringing a new disease into your herd?
- What is the risk of the herd making the new animal(s) sick?
- Will your current management practices be strong enough to prevent disease spread?

Only Buy the Best — Exclude

To truly keep the risk of disease entry low, abstain from purchasing or introducing new cattle to the premises. Maintain a truly closed herd, where no animals are purchased or brought in from other sources, and have not mixed with another herd at any point whether that be through housing on other premises, or animals leaving for a show, etc.

If new animals are absolutely required, there are a few considerations that must be in place:



Know the health status of purchased animals



Isolate and monitor



Test, vaccinate, and/or treat



Record movement



Work with your veterinarian to help answer these questions and establish a plan for how your farm can take a proactive approach to minimizing disease risk.

Health Status — Exclude

proAction requires that you request health information for newly purchased animals. This is of particular importance because many animals can have diseases, such as bovine leukemia virus (leukosis), Johne's disease, and Salmonella Dublin without showing clinical signs, or symptoms of being ill. Consider whether or not the source is reputable. Do they follow similar management protocols? It is also in your best interest to purchase directly from another herd (when required) rather than through an auction or dealer.

Some information to collect from the seller include:

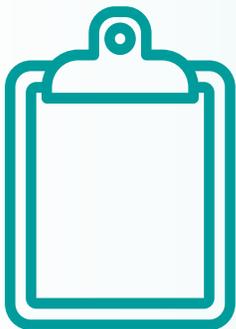


What diseases has this animal been vaccinated against?

Respiratory diseases and abortion-causing pathogens can be controlled with vaccines — this acts like insurance on your investment and your herd!

When did this animal have its hooves trimmed (if applicable) and by whom?

Ensure that proper techniques are employed and that their hoof trimmer follows sanitation and disinfection protocols. The transfer of manure between farms as well as digital dermatitis is not zero in this situation



What is the disease status of the herd and the individual animal?

Understand the importance but also the limitations of disease testing, and use informed judgement, and the entire herd status overall. Examples of questions you could ask include:

- What do this animal's DHI records show? High SCC values or chronic mastitis should raise concern about *Staph aureus* and other infectious mastitis and should be cultured
- Does the herd have any cases of *Staph aureus* mastitis or chronic mastitis?
- What is the percentage of calves with diarrhea and what percentage of these calves die? Is *Cryptosporidium* present?
- What is the percentage of calves with respiratory disease and what percentage of these calves die? Do calves respond to pneumonia treatment? Do they die suddenly? Has the herd been tested for *Salmonella* Dublin?
- What are their colostrum protocols and how might that impact diseases such as Johne's Disease?
- Has the herd ever had experience with/tested for leukosis?



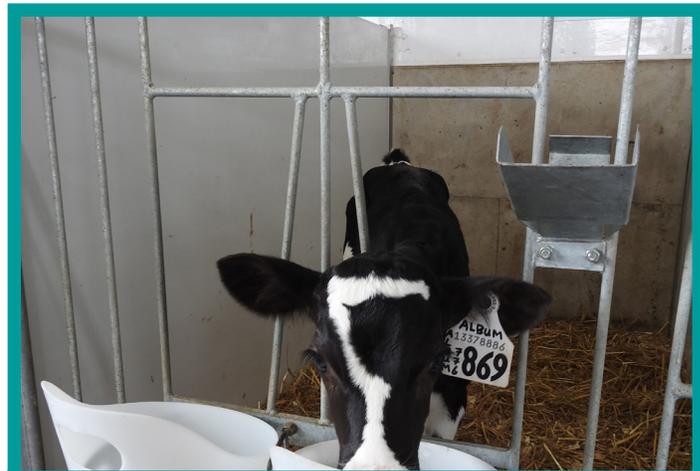
A reputable seller should have this information and be transparent with it!

Isolate and Monitor — Contain

Try to provide a buffer between new animals and the existing herd. Regardless of their disease status at purchase, isolate new animals for 2-4 weeks prior to contact with the herd. Consider the impact stress can have on an animal, and any disease they may have been exposed to during transportation, and the incubation period for different diseases. This will give ample time for symptoms to appear if they are going to. This will also provide time for additional testing if needed.

As per proAction[®], an animal introduction SOP should include designating an appropriate area for incoming animals:

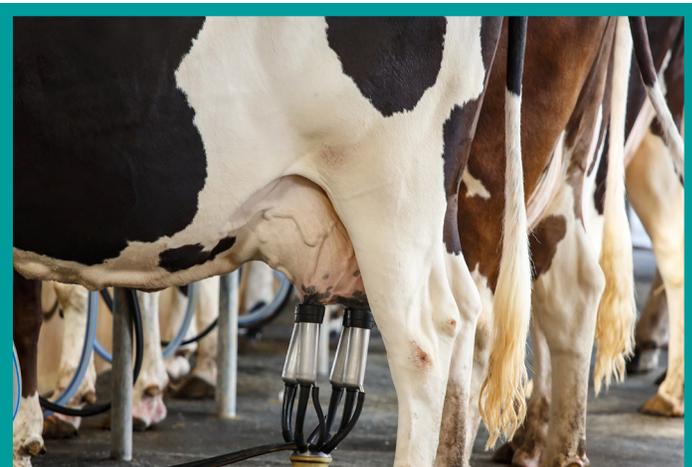
- Establish an isolation area where contact with other animals is prevented.
- Handle these animals last, and use new or clean boots, coveralls, clean hands, and/or gloves; remove after handling.
- Feed and water should not be shared with the herd and isolated animals should be fed separately.
- Use different equipment for them such as thermometers and feeding equipment.
- When animals from different origins are purchased, isolate them separately.
- If a lactating animal is purchased, consider milking individually, or milk last to prevent the spread of contagious mastitis bacteria.



Feed and water should not be shared with the herd and isolated animals should be fed separately



Handle these animals last, and use new or clean boots, coveralls, and gloves; remove after handling



If a lactating animal is purchased, consider milking individually, or milk last to prevent the spread of contagious mastitis bacteria

Test, Vaccinate, and/or Treat — Manage

With the help of your veterinarian, develop a strategy to monitor animals during their 2-4 week period of isolation. It is recommended that you **observe and examine new animals daily**.

Perform a basic physical exam to assess the following parameters:



Temperature



Respiratory rate



Appetite and drinking



Manure consistency



Signs of lameness or injury



Presence of discharge from eyes, nose, vulva



Udder health and appearance of milk (if applicable)



Treat any symptoms and respond to any abnormalities that may arise based on advice from your veterinarian.

Take Advantage of Testing

A physical exam also presents a good opportunity to collect samples of manure, milk, and/or blood for follow-up testing. Again, consider the limitations of certain types of testing and the potential risk involved. If an animal is not having a flare-up of mastitis, how easily could *Staph aureus* be detected? Johne's disease and leukosis are difficult to identify in animals that are not showing symptoms — buyer beware! Being extra-vigilant may not provide enough protection; maintaining a closed herd (where no animals are purchased,

borrowed, or brought in from other sources, and animals do not leave/return to the premises, such as for shows) is best practice, and the only way to guarantee against disease introduction.

Identify and train staff responsible for monitoring cattle. Early identification allows for earlier intervention, which could mean preventing the disease from spreading to the rest of the herd. Ensure they are examining these animals last and use clean gloves, boots, coveralls, and equipment.

Before leaving isolation, review with your veterinarian the vaccine history of the new animal, and what vaccination strategies are in place for the herd. Depending on the type of vaccine used, a booster may be required. Ideally, they would stay in isolation until they have been fully vaccinated.

Record Movement — Manage & Contain

Keep excellent records. Having records for certain diseases (listed below) is a proAction requirement. Record-keeping should include symptoms of disease to map the movement of a pathogen throughout the facility. At minimum, proAction® requires the following:

Record cows with signs of the following:

- Abortion, lameness, mastitis, diarrhea, pneumonia, death

Record calves with signs of the following:

- Pneumonia, diarrhea, death

It is also important to keep track of how an animal might move within a production unit. While not a proAction requirement, it's a good idea to record when animals move into far-off and close-up dry cow pens, hospital pens, fresh cow pens, as this can help determine how a pathogen might spread. Certain health procedures such as hoof trimming, vaccinating, and disbudding/dehorning can also pose a risk for the spread of infectious disease through the transfer of blood and bodily fluid (think leukosis!).



Is Your Herd Ready for a New Animal? Manage & Contain



Take all precautions with introducing new animals, and keep it going!

Before introducing a new animal to the herd, ensure the requirements listed above are followed, but establish that the herd is also well protected to mitigate risk:

- Ensure vaccines are up to date
- Ensure milking hygiene and procedures are in place and followed by all staff
- Establish an area for sick animals to be separated from other animals
- Properly dispose of needles after each use
- Disinfect equipment such as hoof knives, ear taggers, gouge dehorers, hot iron dehorers, halters, ultrasound machines, etc. after each animal (not just after each use!)
- Ensure cleaning and disinfection protocols are in place and being followed
- Ensure footbath routines are in place
- Evaluate calving pens for cleanliness
- Ensure all staff are familiar with workflow to minimize exposure of disease to susceptible animals
 - Work with vulnerable animals first (dry and fresh cows, calves)
 - Work with the general, healthy population next (heifers, lactating cows)
 - Work with sick animals, then change clothing and gloves
 - Work with isolated animals last





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