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Biosecurity - A practical Approach for Beef Herds

Introduction

Outbreaks of livestock disease can be economically devastating. Spectacular diseases, such as the outbreak of Foot and Mouth disease in Great Britain and Europe in 2001, are well known, but just as serious are the insidious diseases that build up over time, such as bovine Johne's disease and drench resistant worms. Not only can your own farming enterprise be damaged financially, but the community and wider livestock industries may also be affected, particularly our ability to maintain access to important export markets

Biosecurity is simply the implementation of a series of basic management practices to prevent the introduction of contagious diseases and noxious weeds. A simple, tailored biosecurity plan can protect your farm livestock investment. Preventing the introduction of animal diseases and weeds by adhering to some simple rules may prevent disaster.

Only introduce animals of known health status

A closed herd offers the best security against the introduction of disease, however, the introduction of genetic material for diversity and production improvement will eventually occur. Not only should potential disease risks be considered when purchasing live cattle, but they must also be considered when purchasing semen, ova or embryos for an artificial breeding program.

Purchase cattle directly from the breeder

Ideally, new stock should be purchased directly from the breeder. Buyers should also obtain records of treatments and vaccinations for the purchased animals. At sale yards due to mixing with other stock, weaner cattle in particular, can potentially be exposed to contagious diseases and those they have no immunity to, such as bovine respiratory disease and bovine pestivirus.

When purchasing cattle from any herd, insist on an Animal Health Statement. This gives valuable information about the risk of Johne's disease (BJD) presence in the herd. By purchasing stock from herds participating in the Johne's Disease Market Assurance Program for cattle (CattleMAP),

there is a lower risk of this disease being present. Under this program an accredited veterinarian has performed a complete risk assessment of the property and has conducted testing of animals. If unable to purchase stock from an accredited CattleMAP property, the next best option is to source cattle from a declared Beef Only herd. These are beef herds that have not grazed with dairy or dairy cross cattle at any time during the previous five years, unless those dairy cattle are part of CattleMAP. Beef Only cattle must also be part of a herd that has not at any time grazed on land that had been grazed by adult dairy cattle during the twelve months before the arrival of the beef herd, unless the dairy cattle are part of a CattleMAP herd. Vendors of Beef Only cattle must complete the National Animal Health statement for Johne's Disease Status of Beef Cattle to enable their stock to be eligible for the scheme.

Isolate introduced animals for a period before they are mixed with the rest of your herd

Once the cattle have been delivered to your property they should be kept isolated and subjected to daily observation. The recommended isolation period is at least 4 weeks. This time allows any acute health problems to appear before the introduced animals are mixed with the rest of the herd. This may involve some changes to management procedures such as purchasing bulls a month earlier than usual, to allow them a period in "quarantine" before mixing with the rest of the herd.

Any animals that become ill shortly after purchase, or during the quarantine period, should be inspected by a veterinarian and treated appropriately. Rapid, early detection and prompt treatment of acute diseases can prevent an outbreak of disease spreading through your herd.

Treatment of cattle for internal and external parasites is also recommended during this quarantine period. This may involve drenching for worms and lice, and vaccination of animals so their health status matches that of the rest of the herd.

This initial separation period also allows the stock to empty their gut contents in a confined and manageable area. Any

weed seeds contained in faeces will be limited to this area rather than contaminating large areas of the farm.

Introduce genetic material – semen, ova and embryos – from tested animals

The licensed artificial breeding industry completes extensive testing to ensure that semen, ova and embryos traded between herds are free of disease. However, diseases such as trichomoniasis, bovine pestivirus and enzootic bovine leucosis (EBL) may be introduced if genetic material is sourced from animals that have not been subject to stringent testing requirements. If in doubt, ask your breeding supplier.

Introduce fodder to a small area of the farm

It is as important to have accurate background knowledge of your source of introduced stock feed as it is to have background knowledge of the health status of introduced animals. Hay, silage and grain could contain noxious weed seeds that could be unknowingly introduced to your own or neighbouring farms. Serious production losses and the implementation of costly control programs may result if weed contaminated fodder is spread over large areas of the farm. Try to feed stock in small areas where weed problems can be detected early and eradicated at low cost.

Minimise contact with other animals – over fence lines, strays etc.

Minimising contact between groups of neighbouring animals may prevent an animal carrying an infectious disease spreading it to your stock by nose to nose contact through a fence line. This can be achieved by various fencing strategies such as electric, double or ring lock fencing, and the judicious use of shrubs and trees. Well maintained and stock proof fences will also reduce the possibility of stray or neighbouring animals entering your property, and mixing with your stock.

Keep vermin under control

Vermin such as dogs, foxes, cats, rats and mice can all spread disease. It is important to keep vermin numbers under tight control. By cleaning grain spills, limiting the number of hiding places, disposing of dead stock and the use of strategic baiting programs, vermin numbers can be effectively reduced. Flies and mosquitoes should also be controlled to reduce the worry they cause to animals, to minimise the spread of diseases such as pink eye, and to reduce the transmission of blood borne diseases.

Use preventative animal health and management practices

Clostridial diseases such as black leg and tetanus can devastate unvaccinated herds and vaccination is a cheap and effective way of minimising the impact of these and many other important cattle diseases. A vaccination plan customised to your farming enterprise and region should be implemented with the assistance of your animal health advisor.

It may be important to disinfect (or change) animal husbandry equipment between each animal. Ask your veterinarian for practical advice on these matters. Some diseases such as enzootic bovine leucosis may be spread via blood on equipment such as dehorners and vaccination needles.

Keep your vehicles clean

Farm vehicles and machinery are another potential way of introducing diseases, parasites and weed seeds to your property. When transporting stock to your property, ensure the vehicle is cleaned and disinfected prior to *being loaded*, so that faecal contamination from other stock is not transported to your farm.

Visitors – veterinarians, workers, family and friends – Wear clean clothes and boots!

It should be routine practice for all farm workers to wear clean clothes and boots for work. Clothes and boots should be clean and free of faecal matter, dust, dirt and blood.

Stock agents and veterinarians are examples of two high-risk visitors to the property, because of their constant close contact with other cattle herds. Your veterinarian should arrive in clean clothes and boots. Equipment used by your veterinarian should be disinfected before and after use.

Ensure all visitors are wearing freshly laundered clothes and their boots are clean before they enter the property. It is important that all visitors who handle your stock follow appropriate disinfection procedures, so that they do not transfer disease from farm to farm. Keep records of visitors entering the property. A visitor register is available from www.farmbiosecurity.com.au

Conclusion

A common hurdle faced by producers is the inability to break down the concept of biosecurity into simple and understandable steps that can be practiced consistently by all farm workers and visitors.

A well-planned biosecurity plan that is in writing and *understood* by all workers on your farm (including contractors) will assist in preventing the entry of disease to your herd. This plan relates not only to exotic diseases but also endemic diseases and weeds that could result in economic losses to your farm business. For more information on simple, tailored biosecurity plans for your farm, contact the DPI animal health staff in your area, or your private veterinarian.

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