

Biosecurity in the livestock industries

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The livestock industries in Western Australia enjoy a relatively disease-free status with protection measures having kept serious animal health threats at bay for many years. Our success in this area arises partly from our fortuitous geographical position as well as stringent quarantine and production standards.

What is biosecurity?

Biosecurity is a general term for a number of measures designed to protect our country, State and individual farming properties from the entry and spread of unwanted animals, pests, diseases and weeds.

Increasing standards of biosecurity will be needed to retain market access and market competitiveness for our livestock industries' exports.

The benefits to Western Australian producers

Compared to other world producers and traders of livestock products, Western Australia has a considerable marketing advantage. Our farms are free of many livestock diseases, for example Foot and Mouth Disease (FMD), Bovine Spongiform Encephalopathy (BSE or mad cow disease), scrapie, Nipah virus and virulent Newcastle disease that cause major production and market losses elsewhere.

The success of Western Australia's livestock exports is closely linked to the excellent health status of its animals.



Figure 1. The high demand for our livestock is partly a result of the health status of our livestock.

Future access to premium markets will increasingly depend on demonstrating freedom from designated animal diseases. The Department of Agriculture and Food routinely conducts targeted surveillance for a number of diseases including bluetongue, bovine Johne's disease, bovine tuberculosis and BSE that influence our accessibility to premium markets.

Surveillance to demonstrate freedom from specified arboviruses in Western Australia's north has opened up new international markets for cattle producers in this region. Access to these markets has significantly increased the income of these northern producers and is related to this surveillance activity.

The outbreak of foot and mouth disease in the United Kingdom in February 2001 illustrated how quickly this disease can spread. The UK emergency would not have developed as quickly had livestock trading not been as prevalent and had strict farm biosecurity protocols been in place when owners brought stock onto their properties.

The rapid spread of FMD in this outbreak emphasised how important farm gate biosecurity is in controlling the spread of an exotic disease.

National and interstate biosecurity

National biosecurity is the responsibility of the Commonwealth Government through Biosecurity Australia and the Australian Quarantine and Inspection Service.

The Department of Agriculture and Food is responsible, for the protocols for interstate biosecurity which involves the inspection and testing of animals and animal produce that cross our interstate borders, as well as those animals sent south from the Kimberley.

Individual farm biosecurity

At a farm level, biosecurity is concerned with the stringent monitoring of the animals, people, machinery and materials that move onto the farm. Effective biosecurity will pay for itself through the control of endemic diseases (diseases present in Western Australia). It is also the best form of defence against exotic diseases. As with surveillance activities, market forces will increasingly demand good biosecurity practices at the farm level and most livestock quality assurance schemes now have biosecurity modules included. Putting in place good

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biosecurity measures on your farm is not an onerous task and could have a major impact on the future of your farming enterprise.

Animal diseases and pests such as footrot, ovine brucellosis, annual ryegrass toxicity, mucosal disease, leptospirosis, bovine genital campylobacteriosis, Johne's disease, swine dysentery, pig pleuropneumonia, infectious laryngotracheitis, and even lice and ticks have all caused significant losses on individual farms throughout the State of Western Australia at some time.

Many of these diseases came onto the property through the movement of stock or via contaminated feed or produce. Most producers, with hindsight, regret not having taken some simple animal health checks, before they purchased the stock, or having isolated the animals on arrival before mixing the new stock with other animals on the property.



Figure 2. If purchasing from saleyards minimise the number of lines and seek vendor declarations.

What you can do?

General

- Decide on the biosecurity goals that you want to maintain for your property.
- Train your staff and family about biosecurity and expect them to uphold these standards.
- Put up signs at the gates to show your biosecurity aims.

Buy from a known and reputable source

Only purchase animals from a source that has a known health status, either the same or a higher status than your own farm, either through vendor declarations or by previous history, i.e. purchase direct from farm. While this is not a guarantee, it is much better than buying through saleyards where the source is unknown and the animals have been exposed to many lines of stock at the saleyard. If you need to buy through a saleyard, purchase one line rather than many lines of small numbers, this minimises the risk of buying diseases such as footrot, lice, ovine Johne's disease or drench resistant worms.

Minimise any introductions from the Eastern States

Interstate movement requirements are in place on animals imported from the Eastern States. While every attempt is made, through certification and testing, to minimise the chance of the introduction of diseases in a live animal, there is always a chance the tests will not detect disease. Therefore, wherever possible, use artificial insemination or embryo transfer to introduce new genetic material.

Isolate and monitor

After purchase, hold stock in isolation from other livestock on your farm for a minimum of seven days and preferably for up to three months and monitor them closely. Animals should be closely inspected for signs of illness including external pests, i.e. lice, ticks, and for unusual signs such as lameness, nervous or respiratory signs. Mobs should be run as a group for as long as possible so the spread of disease is minimised and hopefully confined to one group on your farm. Individual animals should be identified for life so that any problems in those animals can be traced to a possible source.



Figure 3. Isolate introduced stock and monitor their health.

Identification of animals

Whole of life identification of animals ensures accurate and rapid tracing can occur, which is critical to the success of any disease control program.

All animals should be clearly identified as outlined in the *Stock Identification Regulations*,

When moving animals, ensure that waybills and vendor declarations are properly filled out, accurately describing the animals, their origin and destination.



Figure 4. Ensure livestock are correctly identified to ensure accurate tracing.

Breeding stock

Breeding stock are often the only introductions on many commercial farms. It is very important that these animals are sourced carefully, preferably with some health declaration. Diseases such as footrot, Johne's disease, lice and resistant worms can be spread by these introductions.

Rams can also bring in ovine brucellosis which rapidly spreads to others that come in contact with infected rams. Very low lambing percentages and significant financial loss can result. Bulls can bring in campylo-bacteriosis or leptospirosis, both of which can cause significant reproduction problems and financial loss. Vaccinating bulls for these diseases is recommended before introducing them onto the property. Boars can introduce leptospirosis and vaccination is recommended.



Figure 5. Ensure you know the health status of the source of breeding stock and ask for a vendor declaration.

Breeding centres

Farmers should be aware that breeding centres pose a risk for the spread of diseases unless strict biosecurity protocols are followed. Many breeding centres require testing of animals prior to movement to minimise risks of a disease entering the centre.

Animals returning from a breeding centre should be kept isolated for as long as possible and monitored closely.

Report any unusual signs or unexplained deaths

Early reporting of your animal health concerns to a private vet, a government vet or stock inspector and early detection, can minimise the risk of spread and assist you in minimising the impact of a disease on your farming enterprise. The surveillance activity generated



Figure 6. Introduction of exotic diseases are a major risk. Restrict visitor access to your farm.

through farmers reporting health issues also ensures the Department of Agriculture and Food can verify the disease status of our animals and animal products for our international markets.

Diseases such as Newcastle disease in poultry or tuberculosis in cattle can look like a number of other more common respiratory conditions. Owners are encouraged to report any unusual signs. There is an Emergency Disease Watch Hotline number 1800 675 888 if you can not contact someone locally.

Try to source fodder from weed and disease free properties. This is particularly relevant for diseases such as annual ryegrass toxicity that can be spread by the movement of hay.

Maintain strict standards

Ensure trucks entering your property to collect livestock are clean and thoroughly washed.

Ensure all machinery and trucks have access only to general public areas on your farm, and if they need to go into paddocks make sure they are clean.

Ensure footwear and equipment used by contractors and visitors are clean before entering or leaving areas that stock have access to. This is particularly important when working with stock on farms that may have a different disease status.



Figure 7. The poultry industry has strict biosecurity measures in place to stop entry of diseases.

Visitors

People can also introduce pests and diseases on clothing and footwear. Whilst this is particularly important in the introduction and spread of diseases exotic to Australia, it also applies to visitors from within Australia. Ensure visitors to your farm understand your biosecurity standards.

Visitors may also be accompanied by recreational or working animals. These can also be a risk i.e. visiting dogs could introduce hydatids to the farm.

If you run a farm stay, bed and breakfast or if you have overseas visitors, make sure they have not had access to animals overseas for at least 10 days. Do not let them have access to your stock unless they have clean equipment and clothing, and do not let them feed your animals with their own food.

Overseas visitors should be aware that it is illegal to bring animal produce into the country. The accidental contamination of a farm with infected illegal produce is the most likely way a disease like foot and mouth would enter this country.

Quality assurance

Consider becoming quality assured, as marketing of quality assured produce can have many benefits. QA schemes can help ensure animal products have a known genetic make-up, that they are produced with minimum and safe use of chemicals and they are free of specified pests and diseases.

Purchasers of livestock are increasingly requiring vendor declarations as an element of QA programs and good biosecurity. Vendor declarations provide producers with some confidence that farming practices and the disease status of the animals meet minimum standards. The declarations can be voluntary or be underpinned by legislation.

Maintain a secure farm boundary

Efforts should be made to maintain boundary and internal fences to ensure mobs do not mix and strays do not enter the property.



Figure 8. Check your livestock regularly and report unusual illness in your stock to a veterinarian.

Feral animals in the area should be controlled by coordinated community efforts.

The risk of disease spread through the feral animal population is not well understood, but if feral populations are dense enough to maintain the disease, then it could be a significant factor in the spread of endemic or exotic diseases.

For pig and poultry owners the presence of wild birds and ducks can be a disease risk and owners should try to minimise practices that encourage wild birds congregating on their farm.

Conclusions

The adoption of a good biosecurity plan can take some effort. However, the benefits of avoiding production losses from diseases and pests, as well as the increased market advantage from being free of these problems, will outweigh the effort involved.

Market forces will increasingly demand good biosecurity practice at the farm gate and it is likely that biosecurity will be built into all QA schemes.

Further reading

- Farmnote No. 27/2001 Farm biosecurity.
- Miscellaneous Publication 24/2005 Stockguard Sheep Health and Biosecurity Plan.
- Stockguard Biosecurity Checklist for Sheep Farms
- Farmnote No 46/2003 Biosecurity in the Pig Industry
- Farmnote No 66/2004 Keeping exotic diseases out of backyard and non-commercial poultry flocks
- Miscellaneous publication 35/2002 Cattle Industry Biosecurity plan
- Bulletin 4573 Biosecurity for small landholders

Emergency Animal Disease Hotline
Phone 1800 675 888