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Farmnote

Farm Biosecurity

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What is Biosecurity?

Biosecurity is a general description for a set of measures designed to protect our country, State and individual farming properties from the entry and spread of unwanted animals, pests, diseases and weeds. (This definition includes the health of the environment and of people.) Increasing standards of biosecurity will be needed to retain market access and market competitiveness for agricultural products. This Farmnote focuses on biosecurity measures that can be adopted by the producers of livestock and agricultural products so they can minimise the entry and spread of harmful organisms on their properties to help safeguard their businesses.

Maintaining the advantage

Compared to other world producers and traders of agricultural products, Western Australia has a considerable marketing advantage. Its farms are free of many pests, diseases and weeds that cause major production and market losses among its trade competitors.

The success of Western Australia's agricultural exports is closely linked to the excellent health status of its animals and plants. Future access to premium markets will increasingly depend on demonstrating freedom from serious plant and animal diseases, insect pests and weeds.

Experience in recent years with incidents of plant and animal diseases in Western Australia has demonstrated that good levels of farm biosecurity (farm hygiene) are needed to prevent their introduction and markedly reduce the rate of spread and impact of such problems. For example, industry and agencies have responded to the plant diseases anthracnose in lupins, downy mildew in grapes, brown rot of stonefruit, sugarcane smut, chickpea ascochyta disease and weed-contaminated seed. Animal diseases such as footrot, Johne's disease, liver fluke in horses, drench-resistant worms and annual ryegrass toxicity in livestock are being effectively responded to and managed.

The international and domestic quarantine measures provide a first line of defence. No matter how vigilant we are, some agricultural threats (pests, diseases and weeds) will sometimes slip past quarantine inspection points. It is therefore important to also have strong protection at the farm level.

"The rapid spread of Foot and Mouth disease in the United Kingdom that began in February 2001 is an urgent reminder of the need for all agricultural producing countries to develop high standards of biosecurity. The UK emergency would not have developed as quickly or as extensively had better biosecurity measures been in place to minimise livestock movements and had special care been taken by owners when buying stock and introducing them to their farms."

A key biosecurity measure to protect farms is to source disease-free livestock. If you were buying these stock, what measures would you have to prevent them introducing diseases to your property?

Biosecurity in action

Inside their front gate, farmers (owners and managers) can take common sense, achievable steps to prevent entry to the farm of those pests, diseases and weeds that are already within the State. With good biosecurity those problems already here will be less likely to arrive on the farm, and if they do, are more likely to be found at an early and manageable stage. This is farm biosecurity. It aims to keep land, crops and stock free of unwanted pests, diseases and weeds. It does this by managing the movements of stock, produce and equipment that are most likely to carry pests, diseases and weed seeds and by ensuring early detection of threats. The measures include containment of existing problems to the infested part of the farm. The result is easier management and reduced costs. Invariably, "prevention is cheaper than cure".

Good biosecurity can also reduce the spread of an exotic disease incursion and significantly reduce eradication costs.

Industry Biosecurity Plans

In a partnership with the Department of Agriculture Western Australia and the Agriculture Protection Board through the HortGuard™, GrainGuard™, StockGuard™ and BeeGuard™ initiatives, plant and animal industries have begun to prioritise protection strategies for the pests, diseases and weeds that may seriously affect their livelihoods.

The Industry Biosecurity Plans, developed as part of the 'Guard' approach, identify key threats to productivity, sustainability and marketability and outline preventive and response strategies involving government agencies, farmers, agri-businesses, processors, grain handlers, exporters, veterinary practitioners, agricultural consultants and other organisations.

By supporting the development of their industry's protection plan, and adopting relevant parts of it, farmers will make faster progress towards good levels of biosecurity for their production systems and the safeguarding of their businesses.

Quality Assurance (QA)

Many farmers appreciate the benefits of marketing quality-assured produce. Among other attributes, QA schemes can ensure plant and animal products have a known genetic make-up, that they are produced with minimal and safe use of chemicals and they are free from specified pests, diseases and weeds.

QA schemes may include elements of farm biosecurity to ensure a required freedom from pests, diseases and weeds. Many farmers involved in these schemes are already extending the principles to all aspects of their farming because they can see the business benefits of doing so.

The successful marketing of many of our agricultural products will depend increasingly on being able to demonstrate that producers are regularly checking for serious pests and diseases on their land and are taking steps to prevent their entry and establishment. If producers do not do this, when a new problem arises it is hard to demonstrate that the property is not widely contaminated and that neighbours are not also affected.

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

Limiting the spread of harmful organisms

It is not always possible at an individual farm level to prevent the arrival of some pests, diseases and weeds. An individual may be able to do little about wind-borne diseases, spores and seeds, and movement of wildlife or feral animals. However, cooperative efforts to reduce readily transmissible pests and diseases to low levels will benefit the farmer who initially has the problem and reduce the risk of spread to other properties. Everyone benefits when whole districts become more aware of biosecurity and are able to take quick action when a new pest or disease arrives.

Simple steps

Many of the main means of the spread of harmful organisms can be restricted by simple steps. For example, fodder, seed, stock, machinery, vehicles and people can carry weed seeds, pest eggs and disease organisms as well as contaminated soil. Risk is minimised by accessing clean material from sources known to be free of known pests, diseases and weeds. Add to this a few simple practical steps to minimise entry of contaminated material and you have the foundations of farm biosecurity.

For animal diseases, animals and materials in direct contact are the highest risk. The careful selection of stock and the use of on-farm quarantine will greatly reduce the risk of introducing disease. Embryos and semen collected to international standards are significantly lower risks. Use of artificial breeding to move genetic material is highly recommended.

Care must be taken to source recipients from safe sources. This has been a major source of footrot spread in recent times. Similarly, exchange of animals in group breeding schemes without adequate precautions is a major risk for footrot and Johnes disease.

Biosecurity measures prevent spread of diseases from farm to farm

It is also important to limit the chances of contact between wildlife or feral animals and susceptible livestock, to lessen the chances of spread of disease.

FARM BIOSECURITY
What you can do to protect your business
STOP PESTS, WEEDS AND DISEASES AT YOUR GATE

Biosecurity essentials

Farmers can have a major impact on the future of their own businesses and wider industry by implementing biosecurity measures on their own farms. Whilst the 'Guard' initiative will develop industry-wide biosecurity strategies (and possibly codes of practice), here are practical steps you can take to minimise entry to your property and spread of pests, diseases and weeds.

Getting started

- **Decide on the biosecurity goals** and standards you want to maintain and write them down.
- **Train your staff and family** about biosecurity and expect them to share your aims of high standards of biosecurity for the property.
- **Put up** signs at your front gate and elsewhere to show your biosecurity requirements.

Dealing with visitors

- **Put up signs** that tell farm visitors of your biosecurity expectations.
- **Restrict** farm access so that visitors keep to the homestead or central laneways.
- **Do not** allow visitors near stock unless they have clean boots and clothes. If possible, supply visitors with boots and overalls (that stay on your farm).
- **Make it known** that all machinery, vehicles, bins and boxes coming onto your property must be clean. This includes delivery trucks, contract planters, harvesters and sprayers, including borrowed equipment.
- **Inform** suppliers and contractors that all machinery, vehicles and trucks must be cleaned of soil and plant residue (put up a sign).
- **Make it easy** for contractors and visitors to clean machinery, equipment and boots when they come onto, or before they leave your property. Site the cleaning area so it is not on your main thoroughfare.
- **Turn away** or clean anything that does not meet your biosecurity standards.
- **Ensure** that agricultural machinery, plant and equipment are cleaned of plant material and soil before being moved to a new work site. Tell contractors in advance of your requirements.
- **Advise** crop consultants and field officers that their vehicles, boots and hand tools must be clean of potential pest, disease and weed threats.

Vital to farm biosecurity - cleaning machinery of sees, plant material and soil

- **Where possible, use your vehicle** to carry visitors around the farm.

Plant health

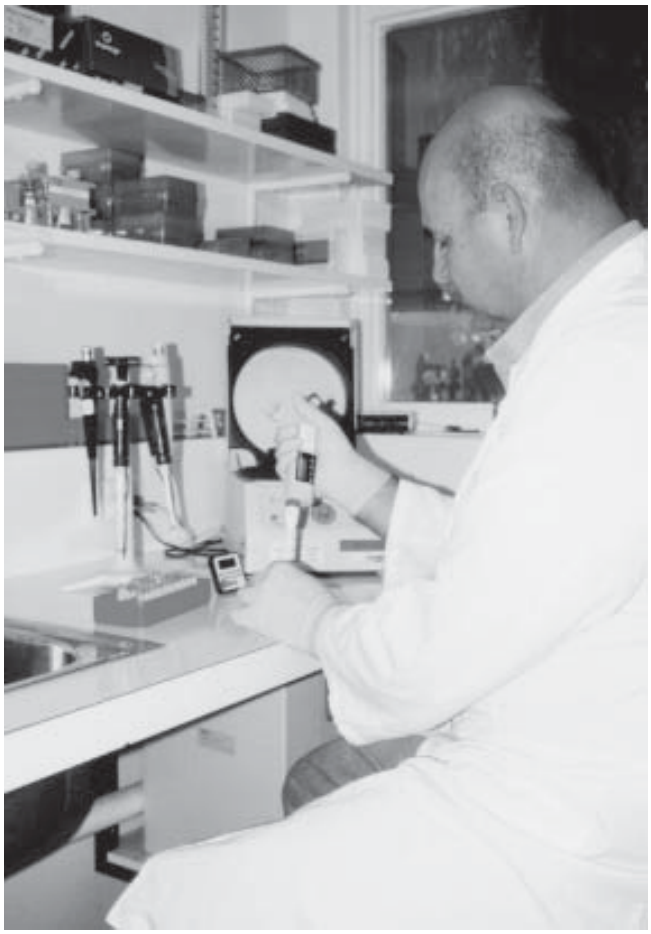
- **Where possible, buy seed** and planting material that are certified or accredited as being free of pests, diseases, or weeds.
- **Source** fodder from weed-free properties.
- **Know** local weeds so you can identify introduced weeds.
- **Work** with neighbours to reduce weed spread.
- **Keep** access roads and yards weed-free.
- **Install** a wash down pad with a safe sump to catch soil and weed seeds.
- **Check** the cleanliness and quality of any seed, grain or hay before it comes onto your property.
- **Have a washdown pad** near the main buildings with a sump that can be readily inspected for signs of weeds and pests.
- **Regularly check** stockyards and holding paddocks for new weeds.
- **Minimise** the spread of such threats as herbicide resistant weeds within the property:

- work clean areas first and contaminated areas last;
- restrict access to, and movement of stock and equipment from, contaminated areas;
- control water runoff and soil erosion from contaminated areas;

- dispose of crop/plant residues promptly; and
- control weeds before they seed.

Animal health

- **Source** animals from disease-free properties.(For example, be aware of the risk of footrot, Johnes disease or liver fluke in stock from the eastern States.) There is a greater risk of footrot in animals from properties in wetter environments. Ask the vendor to provide a declaration that attests to freedom from diseases.
- **Use** Artificial insemination (AI) and Embryo Transfer (ET) to introduce new genetic material unless it is absolutely necessary to introduce live animals.
- **Isolate** and observe new stock in yards or holding paddocks for seven days to one month. Treat by drenching and vaccinating to eliminate diseases in introduced animals. (Regard introduced animals as being potentially infected. If possible, keep them isolated for up to three months.)
- **Confine** and monitor (for their lifetime) animals introduced from high risk areas such as eastern States.
- **To avoid** the introduction of drench-resistant worms, drench sheep introduced from another property when they arrive with a combination of effective products. If possible, run them on a 'wormy' pasture to dilute any resistant worms that remain after treatment.
- **Minimise** the chances of buying in footrot (for sheep producers):
  - seek a declaration from the vendor that animals are free from footrot
  - purchase sheep from farms instead of saleyards
  - if you use saleyards, buy one large line, rather than many lines of small numbers
  - insist that the stock truck is clean before the sheep are loaded
  - keep purchased mob isolated and inspect lame sheep and others at random
  - if you suspect footrot, obtain veterinary or stock inspector advice
  - keep a purchased mob isolated until after the following spring
- **Inspect** introduced sheep for lice. Where possible, establish their likely status for lice and previous treatments for lice.
- **Ensure** boundary and internal fences are maintained to a standard that prevents livestock moving through them.



DNA testing for tuberculosis in cattle at AGWEST Animal Health Laboratories

- **Work with neighbours** to reduce numbers of feral animals. Do not allow animals to escape and add to the feral problem. Capture escaped animals quickly.

General

- **Wash** footwear and hand equipment before entering and leaving high risk work sites such as nurseries, animal houses, stockyards and seed crop areas. Bring washing equipment to the site if necessary.
- **Identify** areas on a property that are contaminated by weeds or diseases so that they can be avoided or precautions can be taken to prevent spread to clean areas. Put up signs and fences to show boundaries of these areas where practicable.
- **Take** special precautions where high-risk situations relating to weeds or infectious diseases exist. This includes any animals that do not come directly from the property of origin.
- **Review** and re-set your biosecurity goals and standards.
- **Report** new pests, diseases and weeds (anything unfamiliar) to the nearest office of the Department of Agriculture Western Australia.

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