NATIONAL SHEEP INDUSTRY BIOSECURITY STRATEGY

2025–2030

SHEEP PRODUCERS AUSTRALIA

WOOLPRODUCERS AUSTRALIA

animalhealth AUSTRALIA

CONTENTS

Acknowledgement

This strategy has been developed by WoolProducers Australia (WPA) and Sheep Producers Australia (SPA) in collaboration with key stakeholders (including state farming organisations, state governments and peak industry bodies) and sheep industry leaders from across Australia. It builds on the 2019 – 2024 strategy and reproduces / references relevant elements of that strategy[1]. Animal Health Australia (AHA) has provided valuable input into the plan and has facilitated the development process. AHA thanks Miracle Dog Business Consulting for helping develop this strategy.

1 The original strategy was prepared by Dr Ron Glanville and Dr Hugh Millar

Definitions

THE FOLLOWING DEFINITIONS ARE PERTINENT TO THIS STRATEGY.	
Biosecurity[2]	Management of risks to the economy, the environment and the community, created by invasive species and diseases entering, emerging, establishing or spreading at enterprise, regional, or national level.
Emergency animal disease (EAD)	Animal diseases that do not exist in Australia (or are rare). If left uncontrolled, such diseases could have severe economic, human health (zoonoses), food supply, environmental and/or animal welfare impacts.
Endemic disease	A disease that is present in a particular population or region and is expected to remain so.
Exotic disease	A disease which is not present in Australia.
Notifiable disease	A serious disease that is notifiable to official agricultural authorities. The national official list is available at www.agriculture.gov.au/biosecurity-trade/pests-diseases-weeds/animal/notifiable
Quarantine	At a farm level, involves holding animals in a specific area where the pest or disease of interest cannot spread to other animals while a period of time passes – 3 weeks is a general rule of thumb.
Risk mitigation measures	Actions that either prevent a biosecurity risk occurring or minimise its impacts.
Surveillance	A process to determine the incidence (rate of occurrence), prevalence, and/or geographic distribution of a disease or invasive species. Surveillance allows for early detection of an incursion or evidence of absence of a disease.
Tracing	The ability to identify and trace animals at the farm, flock and individual level. Tracing involves being able to identify where and when animals have come from prior to the disease incursion (trace back) or have gone to since the disease incursion (trace forward).

2 Taken from National Sheep Industry Biosecurity Strategy (2019-2024)

An ongoing modern approach to biosecurity

The previous National Sheep Industry Biosecurity Strategy (NSIBS) adopted a modern approach to biosecurity by acknowledging that preventing biosecurity risks, such as disease, is more cost-effective than eradicating, containing, or managing the disease. This is shown pictorially in Figure 1. While the economic return from prevention may be as high as 1: 100 ($100 return for every dollar spent), the return from, say, containment may be as low as 1: 5.

To achieve our desired level of protection, it is important that appropriate biosecurity practices are in place along the pre-border, border and post-border continuum.

The risk of a biosecurity breach can be reduced to a low level by effective biosecurity measures; however it can never be eliminated. Understanding that a biosecurity risk level can never be zero, biosecurity practices from the national level through to the farm level remain essential to deliver an appropriate/ acceptable level of protection (ALOP) against external pests and diseases. Vigilant on-farm surveillance is a key component of Australia's biosecurity system.

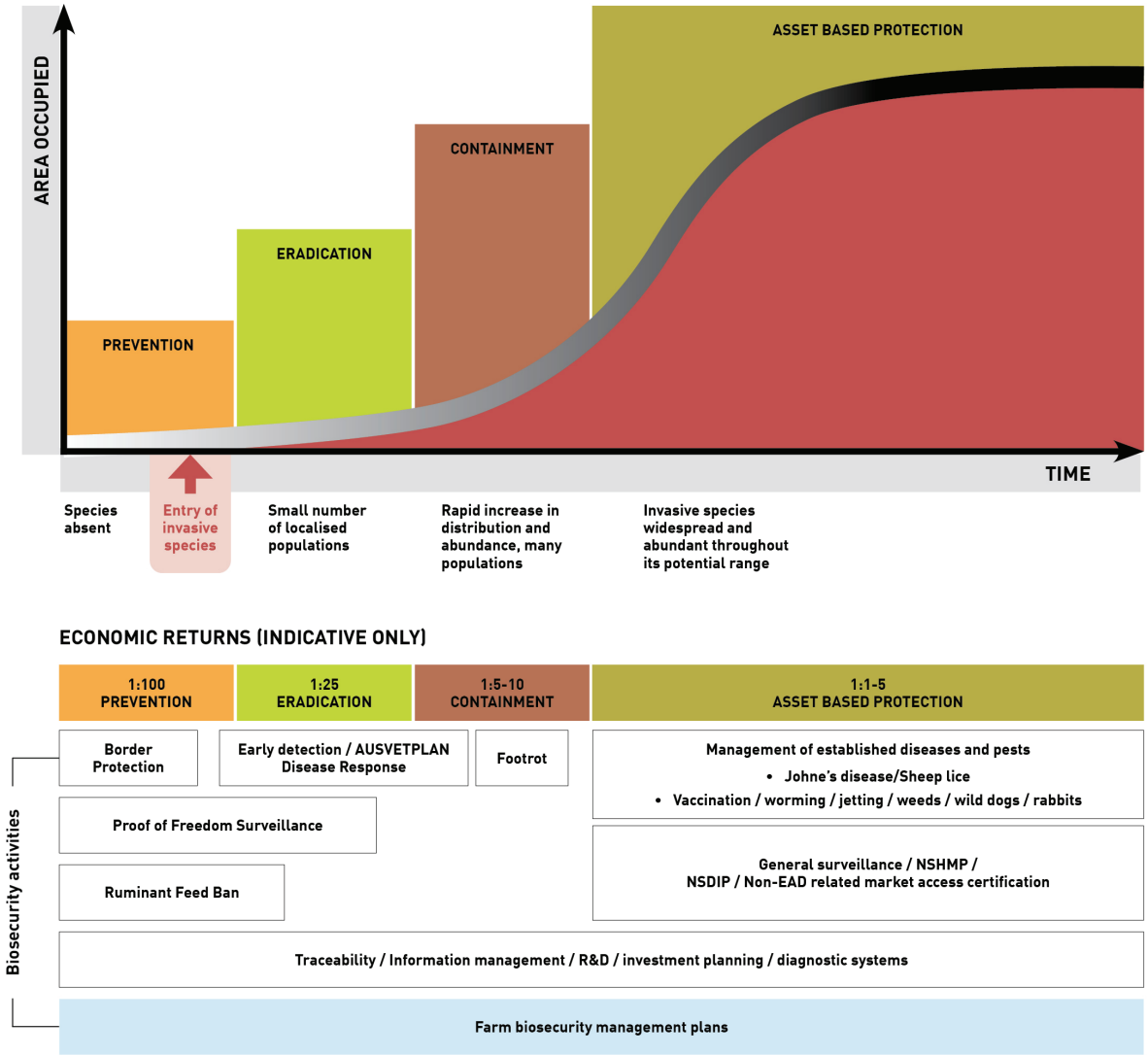

Figure 1: Generalised invasion curve and economic returns at each stage[3]

3 Adopted from the National Sheep Industry Biosecurity Strategy (2019-2024). Invasion curve first developed by the Victorian Department of Agriculture.

At times of low emergency animal disease (EAD) risk, there may be low motivation to act on biosecurity due to the perception that "it won't happen to me." When a crisis hits (e.g., foot-and-mouth disease (FMD) detection in Indonesia in 2022), the industry quickly shifts to crisis mode followed by short-lived motivation.

In December 2022, representatives of WPA and SPA convened to assess the probability and impact of a range of emergency and endemic diseases and pests. Their assessments are relevant to this updated strategy (Figure 2).

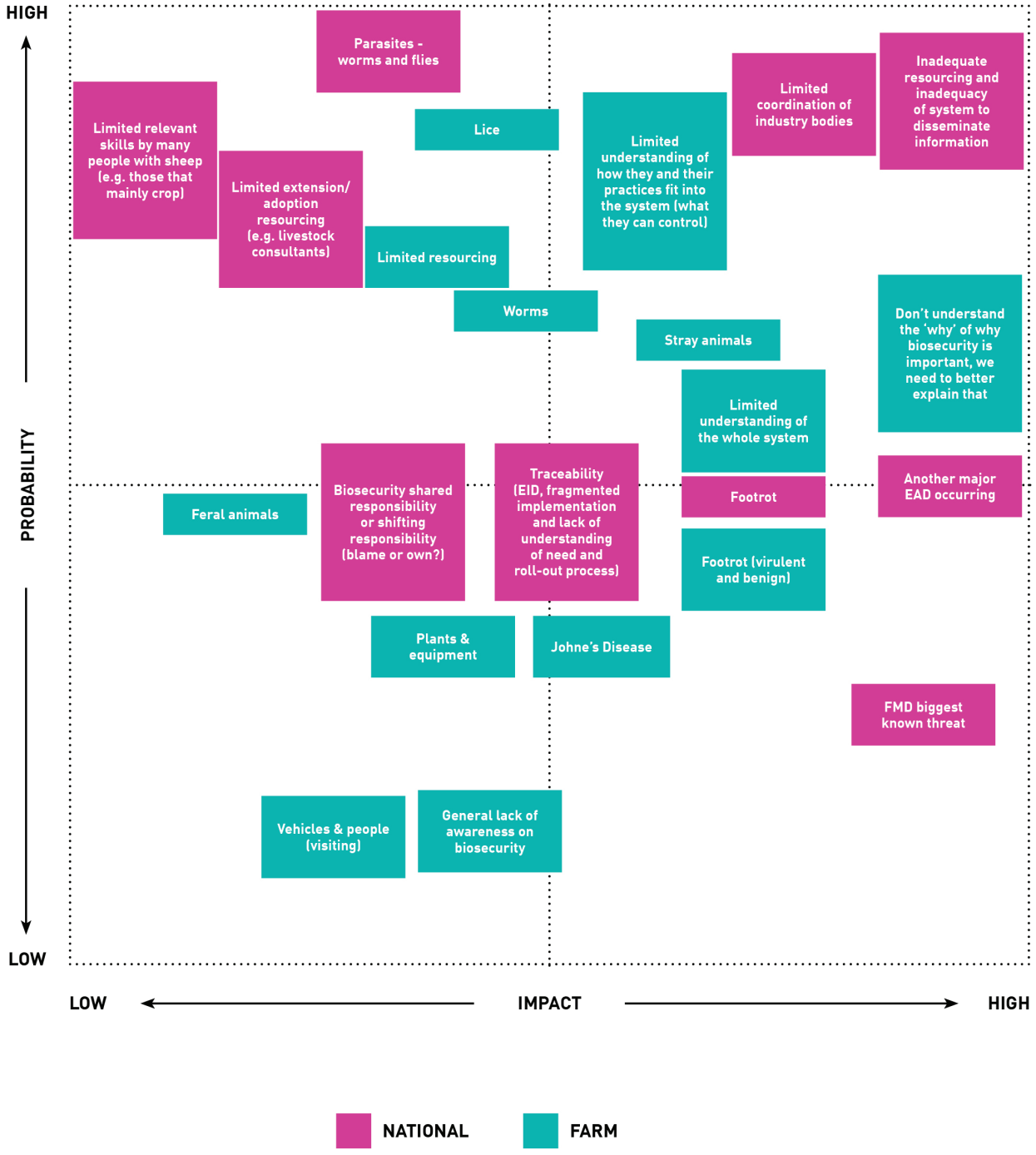

Figure 2: Probability and impact of a range of diseases and pests and resource factors on successful biosecurity (as assessed at producer workshop).

Why have a sheep industry biosecurity strategy[4]

The risk of invasive species and/or diseases arriving in Australia and onto farms is ever-present. There are a number of reasons for this including:

- Increased international travel and trade;
- changing demographics and patterns of land use;
- new and emerging diseases arising from changed interactions with animal populations; and
- climate change.

In recent decades the Australian sheep industry has not been affected by an EAD incursion, however if/when there is an EAD incursion, there will likely be significant productivity and trade impacts.

International markets are also increasingly sensitive to the disease status and integrity of livestock products and production systems. For this reason, a FMD outbreak for example, has been projected to cost the Australian economy up to $80 billion, largely due to lost market access (see below).

Biosecurity is a shared responsibility between governments, industry organisations, the community and individual animal and land owners. While this principle is generally accepted, there needs to be greater clarity regarding the specific responsibilities of all stakeholders, particularly industry.

In developing this biosecurity strategy, the national sheep industry has continued to take the lead in defining roles, responsibilities and strategic priorities. The strategy seeks to outline a consistent approach to biosecurity risk management that allows industry to leverage existing resources, activities and investments, as well as to meet its obligations under legislation and national agreements.

The sheep industry shares a number of biosecurity risks with other livestock industries, and having a transparent, structured and strategic approach to biosecurity risk management clearly positions the sheep industry strongly in the national arena. Improving the biosecurity status and reputation for integrity of the Australian sheep flock, will bring greater peace of mind to all industry participants, and as a result a more productive, resilient and competitive industry.

As part of the whole of industry effort, biosecurity activities must be undertaken at an enterprise level. This will contribute to a reduction in the risk and cost of endemic disease and pest incursions, some of which already have a "patchy" distribution within Australia.

4 This section is based on text from the National Sheep Industry Biosecurity Strategy (2019-2024).

Drivers for change

As noted in the section above, a robust biosecurity system will assist in protecting from economic loss due to the loss of market access, lost production and/or costs of treatments. Estimated costs associated with relevant pests or diseases include:

- A large multi-state FMD outbreak may have an estimated direct economic impact over 10 years of around $80 billion[5], largely attributable to lost export market access. This figure is variable depending on the nature of the outbreak, and the response. Variables include time until diagnosis, animal density in area of diagnosis, and jurisdictional and national management strategies including vaccination and zoning.
- The major parasitic diseases of sheep: with internal parasites costing $665M p.a. and sheep blowfly costing over $320M p.a. in production losses and treatment and prevention costs.[6]
- Other notable diseases endemic to Australia include arthritis, perennial ryegrass toxicosis and Johne's disease, each costing industry more than $50M per year.
- Rabbits, wild dogs, foxes, feral pigs and other vertebrate pests cost the agriculture industry around $800 million per year in predation and habitat destruction.
- Weeds are estimated to cost Australian livestock industries $2.1 billion per annum in control costs and lost production. Serrated tussock is the worst perennial grass weed in Australia and dense infestations can reduce pasture productivity by up to 95% and are costly to eradicate.

Apart from the 'costs of biosecurity incursions', there are real world benefits from proactive biosecurity. There is a strong link between on-farm biosecurity practices leading to reduced treatment costs, lower stock losses, and improved productivity and market access.

- An ABARES report[7] from 2015 estimated the overall farm gate value of biosecurity measures to farmers (on-farm costs and on-farm losses avoided due to the biosecurity system being in place) at up to $17,500 per farmer per annum. It would be far higher today.

5 ABARES (2022) Direct economic impacts of a foot-and-mouth (FMD) disease incursion in Australia.

6 Shephard et al (2022): Priority list of endemic diseases for the red meat industry — 2022 update. MLA Project code: B.AHE.0327

7 ABARES (2015). The value of Australia's biosecurity system at the farm gate. An analysis of avoided trade and on-farm impacts

Vision

Market access and productivity are protected and improved through a unified, accountable and progressive biosecurity framework that has high integrity and is understood, valued and driven by all participants.

Guiding principles

A successful biosecurity strategy will rely on all industry participants/stakeholders actively participating in defined biosecurity practices/roles and being invested in known biosecurity outcomes. This will be demonstrated by:

- Strong leadership and informed decision-making across the sheep and wool industries.
- A focus on the highest biosecurity risks (likelihood and impact) with measurable risk reduction KPIs
- Using a consistent approach in dealing with all biosecurity risks.
- Improving effectiveness of biosecurity through the use of modern technology.
- A biosecurity framework that considers disease and invasive species prevention, incursion preparedness, and ongoing management of endemic pests and disease.
- While addressing prevention, preparedness and management, costs must be balanced against the risk likelihood and impact, and other potential benefits.
- Emphasising good biosecurity practices will lead to increased productivity and profitability.
- Collaboration and partnerships between all stakeholders.
- Sharing intelligence and information on biosecurity risks as well as utilising industry expertise and knowledge to inform decision-making.
- Ensuring a partnership between public and private organisations to address biosecurity issues.

Strengths, weaknesses, opportunities and threats (SWOT)

The following SWOT was developed at the Strategy planning meeting held in October 2024.

STRENGTHS	WEAKNESSES
• A comprehensive strategy already exists. • Industry is leading the way, supported by government. • Existing strategy is very comprehensive. • Producers are involved. • Introduction of eID for the sheep industry. • AUSVETPLAN.	• Resourcing such activities is always an issue – and this varies by jurisdiction. • Mixed farming and peri-urban farming introduces challenges. • How to achieve and measure all the KPI's is a challenge. • Existing strategy doesn't strongly sell the benefits of biosecurity. • Inconsistencies in state biosecurity priorities and policies. • Profitability and seasonal fluctuations may affect producers' capacity to implement effective biosecurity practices.
OPPORTUNITIES	**THREATS**
• Greater collaboration with other industries, especially grains. • Involve domestic and international processors and agents more. • The technology today is more advanced (eID etc). • Producers manage other commodities as well. • Better management of endemic diseases can form the basis of an enterprise biosecurity plan.	• Resource availability is limited. • There is a risk of an EAD incursion, especially from small peri-urban farms. • Aligning with farmer priorities is a challenge. • Biosecurity has a wide scope.

Themes

The same 2024 meeting deliberated on 'what success looks like' for the sheep industry and developed three key themes which form the basis of this strategy.

THEME 1: PROVIDE NATIONAL LEADERSHIP AND ADEQUATE RESOURCES

Activities:

- Sheep industry leaders along the supply chain provide a strong advocacy role in national and state biosecurity forums.
- Further develop the strong partnership between WPA, SPA and AHA and relevant state jurisdictions and farming organisations to influence and implement biosecurity policy.
- Work with the federal government to ensure that border controls and import protocols protect the sheep industry from exotic pests and diseases.
- Further develop the partnership between government and industry with private veterinarians playing an increasing role.
- Ensure ongoing investment for national sheep industry biosecurity programs and seek co-investment opportunities.

Key performance indicators

1. There is effective industry leadership and advocacy on sheep biosecurity matters.
2. The sheep industry has a strong national reputation for biosecurity focus.
3. Hold an annual meeting of all NSIBS partners to assess effectiveness of activities and identify gaps.
4. Consistent biosecurity plans and policies in place (across jurisdictions).
5. Private vets are increasingly engaged in biosecurity implementation.
6. The sheep industry works on biosecurity in partnership with other livestock industries, organisations and governments.

THEME 2: ENHANCE BIOSECURITY COMMUNICATION AND EXTENSION TO INCREASE AWARENESS AND ADOPTION

Activities:

- Quantify and communicate the costs and benefits of good biosecurity (including costs of endemic and emergency animal disease).
- Promote farm biosecurity management and resources, e.g. Farm Biosecurity and Livestock Production Assurance program (LPA).
- Promote producer and supply chain awareness and adoption of good biosecurity practices.
- Addressing the risks associated with lifestyle and non-English speaking farmers through education.
- Promote the use of animal health data through MLA's myFeedback.

Key performance indicators

1. Develop and promote tools to support cost-benefit analysis of biosecurity activities at farm level.
2. Increased understanding and adoption of biosecurity practices by producers as measured by survey.
3. Activities undertaken to increase producer and supply chain understanding of what happens if there is an EAD incursion.
4. Specific activities developed to improve biosecurity awareness and practices amongst higher risk farmers.
5. Increased use of myFeedback by producers.

THEME 3: FOCUS ON THE KEY RISKS

Activities:

- Maintain a watching brief on changes to the national biosecurity risk and gap analysis for the sheep industry.
- Prioritise risk management measures for invasive pests and diseases proportionate to their potential risk to the sheep industry (both endemic and exotic).
- Continue to evolve national EAD preparedness, especially in relation to early detection and reporting at the farm level.
- Encourage the use of tools to enhance farm biosecurity, such as National Sheep Health Declarations (NSHDs).

Key performance indicators

1. Active participation in government consultation processes, forums and working groups to ensure that the biosecurity system continues to deliver on the needs of the sheep industry.
2. Fundamental biosecurity processes are in place (e.g. quarantining) for the majority of sheep farms.
3. More data available on endemic and notifiable diseases (greater feedback).
4. Increased use of the NSHD.

Case studies

These two case studies are reproduced from the 2019-2024 strategy[8]

CASE STUDY 1
ENDEMIC DISEASE EXAMPLE – WHY ON-FARM BIOSECURITY IS IMPORTANT

Sarah is producing superfine wool from her merino flock. Mostly Sarah breeds her own replacement ewes and hence introductions of sheep are relatively infrequent. She prides herself on having a healthy and highly productive flock (and farm business).

Traditionally Sarah has sourced new young ewes, when occasionally needed, from a known and trusted breeder and has had no problems with them. Good wool prices have prompted her to seriously consider expanding her flock. While attending a local saleyard for the sale of some of her old wethers, she bids on and buys a mob of young ewes on impulse. There is no sheep health declaration with the ewes (and Sarah didn't think to ask for one anyway).

The new ewes arrive later that day and she puts them straight out with other young ewes, keen to have them all joined as soon as possible. It later becomes apparent that the new ewes were infested with sheep lice and Sarah has introduced an expensive and protracted problem. She also worries what else she may have introduced with this impulse buy. She remembers too late the information she read in the biosecurity module for the on-line LPA accreditation process.

Several simple actions, part of even a basic farm biosecurity plan, would have prevented Sarah's expensive problem:

- Using a known and trusted source for replacement ewes,
- Insisting on, or buying only sheep accompanied by, a Sheep Health Declaration,
- Inspecting newly purchased sheep on arrival and quarantining them from the home flock for a period of observation (see definition), and
- If Sarah was keen to get these new ewes mated so that their lambs would be in line with the existing flock, the new ewes could have been mated in quarantine, thereby only the rams that came in contact with the new ewes would be at risk.

8 National Sheep Industry Biosecurity Strategy (2019-2024)

CASE STUDY 2
EMERGENCY ANIMAL DISEASE EXAMPLE – WHY EARLY REPORTING IS IMPORTANT

Scene 1

John was checking a paddock of recently shorn sheep when he noticed a few animals that looked sick and were dribbling from the mouth. A few had sore eyes and red-looking areas on the exposed skin. He was pretty busy that day, with a livestock transport due shortly to take a mob of wethers to the local saleyards, so he made a mental note to check the sheep again tomorrow.

The following day when he checked the paddock there were many more sheep affected, with a number already dead and dying. He immediately called his local vet who took samples and the next day a diagnosis of sheep pox was received. It was eventually revealed that John's son and wife had recently visited the Middle East, and they had brought home some local wool for spinning. John's son had also helped with the recent shearing.

The sheep pox diagnosis prompted a very large emergency response, with 53 infected properties eventually identified as a result of the sale of wethers from John's property. Over 70,000 sheep needed to be destroyed to eradicate the outbreak and access to a number of markets was lost for around 18 months. Some cattle export markets were also affected. John became a pariah within the sheep industry.

Scene 2

John in the above scenario is checking his recently shorn sheep, recalls his on-line biosecurity training, becomes concerned that "something is not right", and immediately calls his local veterinarian. He also calls his agent and cancels the sale of his wethers. Sheep pox is diagnosed the following day and eventually all of John's sheep are destroyed. Extensive tracing reveals no other pockets of infection and Australia regains its sheep pox-free status after 6 months. John receives fair compensation for his destroyed sheep and, although his business has suffered a significant setback, he is able to get back on track within a few years. The sheep industry is consequentially affected by this outbreak, but it could have been a whole lot worse.

Glossary of terms

TERM	MEANING
AHA	Animal Health Australia
ALOP	Appropriate/acceptable level of protection
AUSVETPLAN	The Australian Veterinary Emergency Plan
AWI	Australian Wool Innovation
EAD	Emergency animal disease
eID	Electronic identification
LPA	Livestock Production Assurance program
MLA	Meat & Livestock Australia
NSDIP	National Significant Disease Investigation Program
NSHMP	National Sheep Health Monitoring Project
NSIBS	National Sheep Industry Biosecurity Strategy
RD&E	Research development and extension
SPA	Sheep Producers Australia
WPA	WoolProducers Australia