

Regulatory Impact Statement for Livestock Disease Control Regulations

Department of
Economic
Development, Jobs,
Transport and
Resources

Regulatory Impact
Statement for
Sunsetting Livestock
Disease Control
Regulations

April 2017

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Abbreviations

Abbreviation	Description
ABARES	Australian Bureau of Agricultural and Resource Economics and Sciences
AQSIQ	Administration of Quality Supervision, Inspection and Quarantine
BSE	Bovine spongiform encephalopathy
DEDJTR	Department of Economic Development, Jobs, Transport and Resources
EADRA	Emergency Animal Disease Response Agreement
EID	Electronic identification
ESCAS	Exporter Supply Chain Assurance Scheme
EU	European Union
FAO	Food and Agriculture Organisation of the United Nations
FMD	Foot-and-mouth disease
IGAB	Intergovernmental Agreement on Biosecurity
MAFF	Ministry of Agriculture, Forestry and Fisheries
MHLW	Ministry of Health, Labour and Welfare
MLA	Meat and Livestock Australia
MMRF	Monash Multiregional Forecasting
NLIS	National Livestock Identification System
NLTPS	National Livestock Traceability Performance Standards
NPV	Net present value
NVD	National vendor declaration
OIE	World Organisation for Animal Health
PIC	Property identification code
POMS	Pacific Oyster Mortality Syndrome
PPNVD	Pig Pass National Vendor Declaration
PwC	PricewaterhouseCoopers Australia
RFID	Radio frequency identification devices
RIS	Regulatory Impact Statement
S&G	Sheep and Goats
the Act	<i>Livestock Disease Control Act 1994</i>
the Regulations	<i>Livestock Disease Control Regulations 2006</i>
VAGO	Victorian Auditor General's Office
WTO	World Trade Organisation

Executive summary

This Regulatory Impact Statement (RIS) analyses the regulation of disease control for livestock in Victoria and proposes the remaking of the *Livestock Disease Control Regulations 2006* (‘the Regulations’) with some amendments.

The Victorian livestock sector is a significant contributor to Victoria’s economic wellbeing. In 2014, the sector was valued at approximately \$7.2 billion.¹ Furthermore, livestock and its related products represent 57 per cent of the total gross value of commodities produced by the Victorian agricultural sector.

Risk of diseases for the livestock industry

The key risk addressed by the *Livestock Disease Control Act 1994* (‘the Act’) and the Regulations is the threat of livestock disease occurring in Victoria and managing the potential consequences of a disease outbreak. A disease outbreak can directly impact on livestock (and thus Australia’s biosecurity) as well as people (who may be infected by diseased animals). There are also significant potential flow-on impacts from a disease outbreak.

In terms of direct impacts, the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) report into the value of Australia’s biosecurity system at the farm gate estimated that

“a foot-and-mouth disease (FMD) incursion is estimated to have the largest impact, reducing the gross margins of livestock enterprises by between 52 per cent for beef enterprises to more than 100 per cent for pig enterprises (Figure 1). Pig production would be unprofitable in the event that FMD became endemic, with losses exceeding 100 per cent.”²

There are also a range of other diseases which can potentially impact on:

- the production of Victorian livestock
- the health and wellbeing of the general public (zoonotic diseases that can be transmitted from animals to humans – but the rate of transmission and effects on humans vary).

Livestock diseases are split into two categories:

- **Exotic diseases:** Defined in the Act as foot and mouth disease (FMD), rabies or any other contagious or infectious disease or condition not normally found in Australia to which any livestock is subject (as declared) in the relevant orders (see Appendices).³
- **Endemic diseases:** This term generally refers to diseases which are frequently present and well-established in a specific region or population.

High priority diseases include both endemic diseases such as *Anthrax* and exotic diseases such as avian influenza and FMD.

¹ ABS, Value of Agricultural Commodities Produced, Australia, 2013-14, CAT. 7503.0, 2015.

² ABARES, The value of Australia’s biosecurity system at the farm gate An analysis of avoided trade and on-farm impacts

Ahmed Hafi, Donkor Addai, Kyann Zhang and Emily M Gray, Research report 15.2, June 2015. Viewed at: http://data.daff.gov.au/data/warehouse/9aab/2015/fgvbsd9aab/FarmGateValueBiosecServices_v1.0.0.pdf

³ ‘Exotic diseases’ is defined in the Act and specific exotic diseases to which the Act applies are determined by an Order made by the Governor in Council.

Other risks addressed by the Regulations

The Regulations also reduce the risk of chemical contamination and issues of animal welfare due to the ability to trace movements of livestock and determine their origin.

Chemical contamination is a more frequent problem in the livestock industry than disease outbreaks. Chemical contamination occurs for a variety of reasons, with livestock coming into contact with pesticides and herbicides through soil, water and feed. Overseas markets including Japan and the European Union (EU) do not accept livestock products that have been contaminated with chemicals above their maximum residue limit.

Other risks relevant to the livestock industry include the risk of harm to the animals themselves from poor practices or maltreatment (animal welfare issues). Two key animal welfare concerns often expressed by animal welfare groups are associated with the welfare of animals as they move through the supply chain for slaughter and the welfare of animals sent for live export. Improved traceability options can help to manage these risks.

Risk factors

The key factors that contribute to the risk and severity of a contagious disease outbreak in livestock are:

- Transmission of disease through breeding programs when new genetic material is introduced for diversity and productivity into a breeding program.
- Transmission of disease through movement and mixing of livestock along the supply chain, often from multiple sources, means that if a disease is detected at some point in the supply chain, it is more difficult to identify the original source of the disease outbreak.⁴
- Transmission of livestock diseases by other mammals, insects, feed and water contamination. This includes contamination by dogs, foxes, cats, rats and mice that can transmit diseases to livestock and thus cleanliness at all points of the supply chain can influence the likelihood of disease occurring.
- The time taken to identify that an animal is infected and the subsequent time taken in responding by implementing quarantine measures, determine how far the disease can spread before it is contained. This is the most important factor which determines the likelihood of a severe outbreak of disease affecting many animals.

The likelihood of disease outbreaks is difficult to predict, particularly given the small number of major outbreaks that have occurred and the changing policies of governments in Australia. ABARES estimated in 2013 that the likelihood of a large scale FMD outbreak in each year is 1.5 per cent, however, this is based on the experiences of other countries. Australia has never experienced an outbreak of that severity.⁵

Impacts of a disease outbreak

Livestock disease outbreaks have broad ranging impacts on production, market access, the reputation of the industry with local and international trading partners and consumers.

⁴ The Regulations implicitly recognise mixing as a risk factor, through making exemptions from the requirements of section 9A(1)(a) and 9A(1)(b) of the Act and regulation 21(1)(a) of the Regulation with respect to:

- Cattle that remain continuously on their property of birth; or
- Cattle that are less than six weeks of age that are consigned directly to a knackery for disposal and that have a transaction tail tag or calf ear tag affixed in accordance with section 9(a); or
- Cattle moved in accordance with a permit issued by an Inspector of Livestock employed by the Department of Primary Industries and accompanied by an accurate and fully completed Vendor Declaration.

The significance of these exemptions is that they recognise that there is relatively less risk of disease occurring when livestock are not mixed.

⁵ ABARES, NLIS Consultation RIS, October 2013.

The outbreak of a disease in livestock would lead to:

- **A direct loss in production.** Productivity would be reduced where animals need to be destroyed. For example, an outbreak of avian flu in Vietnam in 2005 resulted in approximately 44 million birds (17 per cent of poultry population of Vietnam) being destroyed, at a cost estimate of US\$120 million.⁶
- **Less productivity of remaining stocks.** Diseased animals may lead to lower quality or yield. For example, FMD was shown to be responsible for 33 per cent of the total losses to milk production in Kenya in the 1980s.⁷
- **Losses across other points in the supply chain and related industries.** This would likely include losses to transporters, saleyards, abattoirs and knackeries due to a collective reduction in productivity. For example, the impact of FMD on production losses in regions of the world where the disease is endemic is estimated to range from US\$6.5 billion to US\$21 billion annually, with outbreaks in regions (countries) where the disease is exotic costing around US\$ 1.5 billion per annum.⁸
- **Negative impact on exports.** The largest threat to the Victorian industry from a disease outbreak is the immediate negative impact and/or denied access to export markets (export bans) which have stringent quarantine requirements.
- **Loss of reputation in international markets.** In addition to the initial impact of an export ban, longer term damage to Victoria's reputation (and Australia's reputation more broadly) could also result. For example, Australia's area freedom status from the most contagious and fatal livestock diseases, such as FMD and avian influenza H5N1, provides a competitive advantage over those countries that do not have this status.
- **Broader health impacts for society.** There is a risk of a livestock disease being transmitted to humans via contaminated food or through animal-human contact. Examples of such diseases include *Anthrax*, *brucellosis*, *leptospirosis*, *listeriosis*, *psittacosis*, *mycobacterium infections* (non-tuberculosis), *tuberculosis* and *Hendra*, *Nipah* and *Menangle* viruses.⁹ These diseases can be highly infectious and cause extreme harm to humans, including death.
- **Reductions in consumer surplus.** Consumer surplus can reduce due to a decrease in product quality and price increases from reductions in supply. Importantly, any adverse price impact is borne by consumers who do not wish to or are unable to substitute to other forms of protein or food products.

Past examples of livestock disease outbreaks in Australia provide an indication of the potential impacts and costs:

- A cost of over \$35 million was incurred due to Newcastle disease in Mangrove Mountain NSW in 1999 where 1.9 million meat chickens and 13,000 laying hens had to be slaughtered. It took 3 months and 5,000 people to control the outbreak.¹⁰
- Around \$65.6 million of costs per annum were incurred due to Ovine Johne's disease in South East Australia from 1980. This relates to mostly market losses resulting from government-imposed controls (85%), but also reflects productivity losses (15%).^{11 12}

⁶ World Bank, <http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:20954941~pagePK:64257043~piPK:437376~theSitePK:4607,00.html>, accessed 11 January 2016.

⁷ Ellis P.R., Putt S.N.H. Pan Livestock Services; Reading, UK: 1981. The Epidemiological and Economic Implications of the Foot and Mouth Disease Vaccination Programme in Kenya.

⁸ Theodore Knight-Jones and Jonathan Rushton, 'The economic impacts of foot and mouth disease – What are they, how big are they and where do they occur?', *Preventive Veterinary Medicine*, 112(3-4): 161–173, 1 November 2013.

⁹ Bronwyn Murdoch, Attwood, 'Zoonoses-Animal diseases that may also affect humans', January 2007.

¹⁰ Sydney Morning Herald, 'Chicken kill leaves bitter aftertaste', September 2002.

- In 1997, an estimated 83 properties were affected by an outbreak of *Anthrax* in cattle in the Stanhope/Tatura area in Victoria. One human case was documented involving a knacker worker, who was treated and survived.¹³

While there have (to date) been no catastrophic livestock disease outbreaks in Victoria, these examples show that the potential exists for a catastrophic outbreak to occur.

Various academic studies have estimated the potential economic impact of a serious disease outbreak in a region of Australia, as shown in Table 1.

Table 1: Estimated cost of hypothetical disease outbreak (inflated to 2015 \$)

Disease	Location	Cost	Analysis
Foot and Mouth Disease	Victoria	\$793m (0.3% decrease in gross state product)	This is the Productivity Commission's modelled impact for a 12 month outbreak, using the Monash Multiregional Forecasting (MMRF) model. ¹⁴
	Australia	\$17.3 billion (1 year) ¹⁵	This is modelled under the assumption of a large 12 month outbreak. The estimated losses for a 3 month outbreak are \$7.7 bn.
	Victoria	\$6.5 billion (10 years) ¹⁶	Assumes small outbreak in Victoria with extensive vaccination. Broken down into \$0.09bn of control costs and \$6.40 billion of revenue losses. Uses 7 per cent discount rate.
	Australia	\$20.1 billion (1 year) ¹⁷	One year outbreak, with 100 per cent of export markets closed in the first year. The loss from market access represented 90 per cent of total modelled losses. ¹⁸
	Australia	\$52.2 billion (over 10 years) ¹⁹	A large outbreak scenario where an FMD outbreak was to occur in Victoria and spread to the other eastern states of Australia. In this scenario, restrictions on exports could last for several years, with market share not fully recovering until 10 years later.
Bovine tuberculosis and brucellosis^e	Australia	\$19.6 billion loss to livestock producers. A net loss of \$8.05 billion (including consumers) (in 1987 dollars). ^{20 21}	Assumption of both whole country exclusion and zone exclusion.

Due to the catastrophic nature of such an outbreak (should it occur), a precautionary-type approach is necessary to reduce these risks.

¹¹ RD Bush, 'The biological and financial impact of Ovine Johne's disease in Australia', 2005.

¹² Information provided by DEDJTR.

¹³ Information provided by DEDJTR.

¹⁴ Productivity Commission, *Impact of a foot and mouth disease outbreak in Australia*, 2002, p.86

¹⁵ Ken Matthews, *A Review of Australia's preparedness for the threat of foot-and-mouth disease*, 2011, P.3.

¹⁶ ABARES, *Potential socio-economic impacts of an outbreak of foot and mouth disease in Australia*, 2013, p. ix.

¹⁷ Centre for International Economics, *NLIS (sheep and goats) business plan: the costs of full compliance with NLTPS*, 2010.

¹⁸ ABARES, *Potential socio-economic impacts of an outbreak of foot and mouth disease in Australia*, 2013.

¹⁹ ABARES, *Potential socio-economic impacts of an outbreak of foot and mouth disease in Australia*, 2013, p.25

²⁰ Gary Stoneham and J. Johnston, (1987), *The Brucellosis and Tuberculosis Eradication Campaign - An economic evaluation of options for finalising the campaign in Northern Australia*, ABARE Occasional Paper 97, AGPS, Canberra.

²¹ At the time of this outbreak, diseases that are chronic in nature were still present in Australia. Advice provided by DEDJTR indicates that any future outbreak of tuberculosis would likely be small in size due to the slow nature of the spread of disease.

Rationale for government intervention

In the absence of regulation, individual agents in this market do not receive all the benefits of their potential decision to combat diseases, while they do incur most of the costs. For example, producers may not derive personal benefit from disease control investments that minimises the risk to consumer health. Thus, there is no direct incentive for any one agent to spend more on disease reduction than would benefit them personally. Some producers or intermediate agents would likely not make any investment in disease reduction due to disease's 'invisibility', as incurring these costs may place them at a cost disadvantage to their competitors.

Thus, in the absence of government intervention, economic outcomes are inefficient, and would result in a market failure due to the presence of negative externalities.

Government is well-placed to enable the delivery of socially-efficient outcomes for disease prevention. Furthermore, there is a long and successful historical precedence of government being well-equipped to deal with matters of national and state-wide reputation, including public health, food quality, community safety and environmental care. This means government is best placed to deliver protections efficiently.

Market failure is also present in relation to the degree of information efficiency in the market. Informational integrity and efficiency is critical to the efficient operation of any market, as supply and demand decisions do not have to account to the same extent for poor quality. It therefore allows the incentives of agents to be better aligned. This tends to increase the quantity traded in the market.

Government intervention can correct the informational problem through, for example, an accurate animal tracking system to increase traceability. This would mean that individual agents internalise the costs of their decisions in the case of misdemeanours (as the source of the animals can be more easily traced).

Objectives of the Regulations

The Victorian Government has a number of overarching objectives for the management of biosecurity. DEDJTR aims to:

- Minimise the impact of pest, disease, invasive plants and animals, chemical use and residues, and animal welfare incidents upon market access, and the environment and production systems, while ensuring food safety and public health.
- Maximise the adoption of best practice in animal welfare, chemical use and residues, and biosecurity (control of pests and diseases and invasive plants and animals either naturally occurring or deliberately introduced).

Specifically, in relation to livestock disease, the objectives of the Regulations are to provide for the appropriate notification of livestock diseases and record-keeping and identification requirements for certain livestock for traceability purposes to minimise the impact of a disease outbreak.

Options

The options considered in this RIS all involve:

- maintaining the current electronic identification (EID) requirements for cattle as:
 - industry stakeholders and Departmental experts generally consider that the current cattle requirements are working well
 - EID for cattle is part of a national approach, and any change to Victorian requirements would lead to inconsistencies with other states and territories.
- maintaining requirements in relation to cattle identification, disease notification, testing of animals, and regulations affecting apiaries and other non-farm animals.
- incorporating a number of orders and notices into the Regulations for administrative efficiency. These orders cover matters such as requirements to vaccinate poultry, the

identification of cattle, sheep and goats, and requirement to complete a National Vendor Declaration (NVD) for the sale of pigs, sheep and goats.

The options in this RIS differ in terms of the requirements for sheep, goats and pigs as follows:

- **Option 1:** Re-make the Regulations (as at 1 July 2016), requiring visual identification of sheep and goats, whilst maintaining current requirements for the identification and tracing of pigs.
- **Option 2:** Re-make the Regulations (as at 1 July 2016), and introduce enhanced visual and mob-based identification for sheep and goats. This Option also involves incorporating most of the key requirements (relating to identification and uploading of information) in the NLIS Pig Traceability Standards into the Regulations.
- **Option 3:** Re-make the Regulations, however, require mandatory EID for all sheep and goats born on or after 1 January 2017. This option includes a phased-in mandatory EID for sheep and goats born prior to this date (EID by 2022) and sheep and goats dispatched from a Victorian property, which have been introduced from interstate on or after 1 January 2019 (excluding those travelling directly to abattoirs for slaughter). This option reflects the recent Ministerial decision to implement sheep and goat electronic tagging requirements in Victoria. This Option also involves incorporating most of the key NLIS Pig Traceability Standards into the Regulations.
- **Option 4:** Re-make the Regulations in the same way as Option 3, except that sheep and goats born before 1 January 2017 will be permanently exempted from the requirement of EID tagging. This Option also involves incorporating key NLIS Pig Traceability Standards into the Regulations.

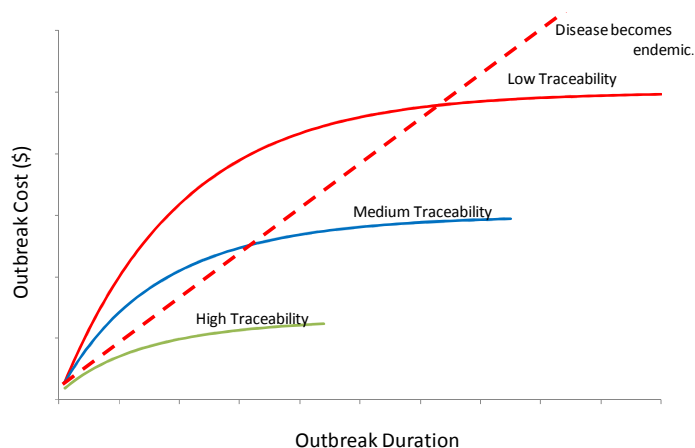
Each option has been assessed against a situation where there are no regulations in place in relation to livestock disease control.

Benefits of the options

The primary intention of all options is to improve traceability. The ability to trace back and trace forward diseased livestock to determine the source of the disease and the other potentially impacted livestock in an accurate and timely manner is critical in the event of a disease outbreak. While traceability will not prevent an outbreak from occurring, it has the potential to significantly reduce the duration, size and costs of an outbreak. The importance of this tracking was demonstrated during the 2001 FMD outbreak in the UK.

Figure 1 illustrates the broad relationship between the ability to trace back, the likely duration of the outbreak and the relevant total cost (to the industry and the broader economy).

Figure 1: Relationship between traceability, outbreak duration and cost impact



The degree of traceability is also determined by the accuracy of the livestock movement data. For instance, only a system that identifies individual livestock with low instances of error can achieve a high level of traceability.

Trace back is also important in relation to tracing back chemical residues or animal welfare issues.

Option 1 – Remake the existing Regulations

Remaking the existing Regulations will enable the current degree of traceability to continue, however the current mob-based system for sheep and goats is considered to only provide a low to medium level of traceability. This is due to the time required to trace-back and the limited accuracy of data (e.g. taken from manually written sheets that are sometimes incorrect, incomplete or illegible).

This option provides better traceability than the no regulation base case where there is unlikely to be comprehensive tagging of certain livestock.

This option will not change the requirements for tracing of cattle or pigs.

Option 2 – Remake existing Regulations but require enhanced visual and mob-based system for sheep and goats

Introducing additional requirements for the mob-based system of tracing sheep and goats is likely to increase the accuracy of trace-back primarily by requiring sampling to occur, managed by industry, that will verify the information provided in the NVD, however it will not improve the timeliness of the process as it still relies on manual hard copy versions of NVDs.

Like Option 1, this option will not change the existing requirements for tagging of cattle, however most of the requirements (relating to identification and uploading of information) in the NLLIS Pig Traceability Standards will be incorporated into the Regulations. While most of the larger producers already adhere to the requirement in the pig standards, it is anticipated that by putting the requirements in the Regulations, and thus making them compulsory for all producers and processors, that compliance with the requirements would increase. However, it is noted that DEDJTR currently has limited data on the location of smaller producers and processors and therefore monitoring for compliance may remain challenging.

Option 3 – Remake existing Regulations but require mandatory EID tagging for all sheep and goats born on or after 1 January 2017, followed by phase-in of mandatory EID for sheep and goats born prior to this date or coming from interstate.

The introduction of a requirement for EID for sheep and goats in Victoria is expected to improve the accuracy and timeliness of trace-back due to the technology and automation that can be utilised in such a system.

Benefits in relation to cattle are as for Option 1, and for pigs are the same as for Option 2.

Option 4 – Remake existing Regulations but require EID for sheep and goats, with a permanent exemption for those sheep and goats born before 1 January 2017

This option is expected to provide similar benefits to Option 3.

Benefits in relation to cattle are as for Option 1, and for pigs are the same as for Option 2.

Benefits of improved traceability

ABARES has projected that a major outbreak of FMD in Australia would cost the national economy a total of \$52.2 billion over a period of 10 years (from a single outbreak). Their hypothetical outbreak scenario originated in Victoria which, due to the higher density of

livestock and prevalence of intensive farming, was considered to be the most likely source of an outbreak.²² Nonetheless, the total figure of \$52.2 billion is for the nation as a whole, and certain assumptions are required to estimate the impact on Victoria:

- The share of the economic impact is proportional to Victoria's share of agricultural revenue from livestock, ie 30 per cent.²³
- Victoria does not experience higher claims for compensation or higher economic impact if it was to be the source of the outbreak.
- Although the cost of the hypothetical outbreak is spread over 10 years, the cost of the outbreak can be aggregated and expressed as a total cost per incident.

Under these assumptions, we have estimated that the economic cost to Victoria of a major disease outbreak (based on the ABARES major outbreak projection) would be **\$15.7 billion**.

Likelihood of a major livestock disease outbreak in Victoria

Estimating the likelihood of a major FMD outbreak in Victoria is a hypothetical calculation given the rarity of such outbreaks. In their 2013 NLIS Decision RIS, ABARES used an assumed probability of an FMD incursion per year of 1.5 per cent.²⁴ This was taken from the Centre for International Economics' 2010 report, which stated that an FMD outbreak is likely to occur once or twice in a 100 year period.²⁵ A probability of 1.5 per cent implies that an outbreak is likely to occur, on average, **once in every 67 years**.

Cost of a major outbreak in Victoria using an expected value approach

The expected value cost of a major outbreak in Victoria combines the total economic impact with the likelihood of the outbreak. This implies:

- \$15.7 billion in impact once every 67 years.
- An expected value of \$234 million every year (ie. \$15.7 billion divided by 67), or **\$2.34 billion every 10 years**.

Non-quantified benefits

In addition to the quantified benefits of potentially avoiding a catastrophic event, there are additional benefits provided through improved traceability. These include animal productivity benefits, animal welfare benefits and improvements in food safety.

Furthermore, systems designed to enable animals to be traced back to the farm on which they were born can also be used to help support claims by suppliers of meat and dairy products about features of the production systems that were used during an animal's life, (eg 'grass fed', as well as claims relating to food safety, product integrity and provenance).

Costs of the options

The cost of the options are provided in Table 2 and include the costs of identification, tracing, testing and notification.

²² ABARES, *Potential socio-economic impacts of an outbreak of foot and mouth disease in Australia*, 2013, p.25.

²³ ABS, *Value of Agricultural Commodities Produced, 2014-15*, 7503.0.

²⁴ ABARES, *Potential socio-economic impacts of an outbreak of foot and mouth disease in Australia*, 2013, p.25.

²⁵ Centre for International Economics, *NLIS (sheep and goats) Business Plan: The costs of full compliance with NLTPS*, June 2010.

Table 2: Estimated costs of options (\$million) over 10 years (Net Present Value)

Option	Identification costs	Tracing costs	Testing and notification costs	Total costs
Option 1	83.3	2.7	2.4	88.4
Option 2	83.3	183.2	2.4	268.9
Option 3	197.1	8.3	2.4	207.7
Option 4	195.1	8.3	2.4	205.8

The majority of the costs of the proposed Regulations under each option relate to the identification requirements. It is only in the enhanced mob-based Option 2 that tracing costs become the largest cost component as that option utilises a more manual, labour-intensive approach to traceability than for Options 3 and 4. For other options, tracing costs are between two to three per cent of the overall cost of that option.

Likewise, testing and notification costs are between one and four percent of total costs under each option.

In addition to the costs above, there are other costs that have not been included in this quantification that are discussed below.

Non-quantified costs

Each of the Options 1 to 4 is also likely to have an impact on the 'bee' industry. However, the Regulations do not require tagging requirements for bees (for practical reasons) and the requirements are comparatively less onerous. The majority of the requirements relate to moving bees across state borders.

No information on the movement of bees across borders was available, however the total cost of these requirements is believed to be relatively less significant than that of other regulatory costs in this RIS.

Summary assessment of options

Table 3 provides a summary assessment of each option in relation to:

- the estimated cost (in net present value terms over the 10 year assessment period)
- the reduction in the severity of major incidents that would be required for the option to break even over 10 years compared to the no regulation base case (based on the example of disease outbreaks only)
- an assessment of the two components required for good traceability (timeliness and accuracy).

Table 3: Assessing the costs and benefits of the options

Option	Description	Cost (NPV over 10 years)	Required reduction in severity of a major incident needed to break even ²⁶	Traceability	
				Time until tracing can be completed	Expected accuracy of tracing
Option 1	Visual mob-based	\$88.4m	3.8%	Over a week	Poor
Option 2	Enhanced mob-based	\$268.9m	11.5%	Over a week	Moderate
Option 3	EID	\$207.7m	8.9%	A few hours	Very good
Option 4	EID with exemptions	\$205.8m	8.8%	A few hours	Good/ very good

The break-even point is based on the required reduction in the severity of a major incident needed to fully offset the cost of the relevant Option. For all Options, only a small reduction in severity is required in order to break-even. This suggests that all Options are preferable to the base case, given that the measures would allow the Government to better control and contain any livestock disease outbreak.

Options 3 and 4 are expected to provide the greatest benefits due to their traceability and expected accuracy of tracking, meaning that there is the potential for greater reductions in the severity of an incident. In contrast, information provided by DEDJTR and stakeholders indicated that Options 1 and 2 are expected to deliver a significantly lower reduction in the severity of an incident.

While Options 3 and 4 would incur costs that are more than double those of Option 1, advice from DEDJTR experts indicates that the significantly faster traceability (a few hours compared with more than a week) would be expected to deliver benefits that more than exceed the additional costs of these options, ie achieve at least an additional 5.1 per cent reduction in the severity of an outbreak.

Option 3 is the preferred option because it provides the appropriate balance between protection from the risk associated with livestock disease outbreak (through full traceability from 2022) and allowing sufficient time for interstate and smaller producers to adjust to the new requirements.

Its increased protection from the risk of livestock disease outbreaks (relative to Option 4) outweighs its slightly higher estimated cost (\$205.8m vs \$207.7m over 10 years). That is, Option 3 is expected to lead to a greater than 0.1 per cent reduction in the severity of a major outbreak (as compared with Option 4), and therefore is expected to more than offset its additional cost.

In addition, Option 3 provides for easier compliance in saleyards (from 2022) as compared with Option 4. This is because it can be difficult to quickly distinguish four year-old sheep (who would need an electronic tag) from five year-old sheep (who, under Option 4, would not need an electronic tag from 1 January 2022).

It is important to note that while the break-even analysis uses disease outbreak as the example of a major incident, the benefits of improved traceability would also reduce the likely impact of a chemical residue or animal welfare issues.

The preferred option

Option 3 is preferred because it is expected to provide the greatest level of benefits in comparison to its costs.

Option 3 includes remaking the Regulations, with the following changes:

²⁶ This is calculated by dividing the cost of the Option over 10 years (in NPV terms) by the expected impact of a major incident in each given year (ie \$15.7bn every 67 years equates to a \$2.34bn expected avoided cost over 10 years). For Option 1, this break-even level is 3.8 per cent (\$88.4 million NPV cost over 10 years divided by 2.34bn expected avoided cost over 10 years).

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- Mandatory EID for all sheep and goats born on or after 1 January 2017, while sheep and goats coming from interstate and not travelling directly to an abattoir for slaughter will be required to be EID tagged from 1 January 2019 before they are moved from the Victorian property. Those born before 1 January 2017 will be exempted from the requirement to be EID tagged only until 1 January 2022.
- Rolling the current NLIS Pig Traceability Standards into the Regulations.
- Incorporating a number of Orders and notices made under the Act into the Regulations for administrative efficiency (which industry is already required to comply with).

Option 3 is expected to deliver far greater benefits than Options 1 and 2 due to the ability of EID to quickly and accurately trace animals. It increases traceability compared with Option 4 by limiting the exemption to the requirement for sheep and goats born prior 1 January 2017 until 2022.

The Department of Justice and Regulation (DJR) has confirmed that the preferred option does not limit any human rights set out in the Charter of Human Rights and Responsibilities.

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1 About this Regulatory Impact Statement

1.1 Scope of this RIS

This Regulatory Impact Statement (RIS) analyses the regulation of disease control for livestock in Victoria and proposes the remaking of the Livestock Disease Control Regulations 2006 ('the Regulations') with some amendments.

The purpose of this RIS is to:

- establish the nature and extent of the problems that would exist in the absence of the Regulations
- articulate the desired objectives of addressing the identified problem
- identify a set of viable options to address the established problems
- assess the costs and benefits of these options, and the expected effectiveness of each option in addressing the problem
- identify and describe a preferred option to achieve the desired objectives
- develop an implementation and review strategy for the preferred option.

In accordance with Section 5 of the *Subordinate Legislation Act 1994*, there is an automatic revocation of statutory rules ten years after they are made. The Regulations were due to sunset on 19 December 2016, but have been extended for 12 months until 18 December, 2017. After this date, the Regulations will expire and its provisions will no longer apply.

This RIS is prepared in accordance with the Victorian Guide to Regulation (2016), which provides a step-by-step guide to preparing RISs.

1.2 Existing legislative framework

The *Livestock Disease Control Act 1994* ('the Act') is the main regulatory tool used by the Victorian Government to prevent, monitor, control and eradicate certain livestock diseases, including exotic diseases.

The stated objectives of the Act, are to:

- protect public health by preventing, monitoring and controlling diseases transmissible from livestock to humans
- protect domestic and export markets for livestock and livestock products by preventing, monitoring and controlling livestock diseases
- provide for the prevention, monitoring and eradication of exotic livestock diseases
- provide compensation for certain losses caused by livestock diseases
- facilitate the operation of livestock identification and tracking programs for disease and residue control and market access.

The Regulations support the operation of the Act, and, in summary:

- provide for the timing and manner of the notification of livestock diseases
- provide for the manner in which certain livestock are identified
- set out requirements for the prevention of livestock diseases

- provide for the recording or forwarding of information relating to the movement of identified livestock
- provide for other matters authorised by the Act.

The Act and Regulations primarily impose obligations on the following industry participants:

- **Primary producers:** Primary producers, including hobby producers and people who own livestock as pets, breed and raise livestock such as cattle, sheep, goats, pigs, chickens, horses, alpacas, bees and aquaculture.
- **Stock and station agents:** Stock and station agents act as brokers for primary producers and sell livestock via private sales, from farm to farm, private auctions, directly to abattoirs or through saleyards.
- **Saleyards:** Primary producers and stock agents use saleyards to buy and sell livestock. Livestock can be sold based on weight or numbers.
- **Abattoirs/knackereries:** Abattoirs and knackereries slaughter livestock and process animal carcasses into meat and meat related products.
- **Operators of agricultural shows:** Operators of agricultural shows occur throughout the state at various times throughout the year.

Along with requirements relating to notification, testing, compensation, and introduction of livestock, the Regulations also cover the identification of livestock. The identification requirements operate within the broader National Livestock Identification System (NLIS) (see below for further background). The NLIS enables livestock to be identified and tracked from their property of birth to slaughter/death to ensure these animals are traceable. In the instance of a disease outbreak, this traceability allows for better containment of the outbreak, and thus minimising the consequence and economic cost to the state.

NLIS standards

The NLIS was created to enhance Australia's ability to identify and trace livestock from property of birth to slaughter or export. Traceability refers to the proportion of animals that can be successfully traced between defined points in the supply chain or over time. Traceability is important for managing biosecurity, food safety, market access and animal welfare risks. The NLIS was developed to meet the National Livestock Traceability Performance Standards (NLTPS). These standards are designed to ensure traceability within 24 hours of notification to the Chief Veterinary Officer of all foot-and-mouth disease susceptible livestock species. The standards also contain extra provisions for cattle to require lifetime traceability within 48 hours and traceability of all other co-mingled cattle. Animal Health Australia (AHA) undertakes regular audits of the National Livestock Traceability Performance Standards as a process for the continual improvement of the various NLIS programs.

NLIS Pig Traceability Standards

The voluntary NLIS Pig Traceability Standards (see Appendix C for full standards) specify minimum standards that, if adhered to, ensure the traceability of pigs for disease control and food safety purposes. They are the result of collaboration between the pork industry and government and are intended to encourage the harmonisation of legislation in Australian jurisdictions. The key requirements in the standards relate to:

- the identification of pigs
- movement documentation for pigs and uploading of information to the NLIS database, including use of the PigPass system
- post-sale information provision
- verification, (for example, reconciling kill files).

Compliance with the standards is currently high among medium and large producers and processors. DEDJTR estimates that the majority of smaller producers, hobby farmers and

pet pig owners do not currently comply with the requirements of the standards, generally due to lack of awareness.

The NLIS in Victoria

The NLIS (Cattle) was developed following the 'cotton trash' residue crisis in 1995-96 when contaminated cattle arrived in Victoria from NSW and could not be traced. Victorian processors were then denied access to markets in North Asia and the US markets. The first NLIS (Cattle) tags were issued in February 1999, and the EU further emerged as a driver for better traceability in late 1999, by which time Victorian producers were using NLIS (Cattle) tags on a voluntary basis.²⁷

1.3 Current regulatory requirements

The notification of diseases is required under the Act, and the obligations of livestock owners, vets, laboratories and others are outlined in the Act, the Regulations and associated orders. The following sets out the current regulatory requirements in the Regulations.

1.3.1 The Regulations

Identification requirements

The Act and the Regulations currently require that cattle be electronically identified with NLIS-accredited radio frequency identification devices (RFIDs) containing microchips that are encoded with unique numbers linked to the Property Identification Code (PIC) that the RFIDs were issued to. Sheep and managed goats must be identified with an NLIS visual or RFID ear tag (exemptions will apply to some miniature and rangeland (feral) breeds). Pigs over 25 kilograms must be tagged via a permanent tattoo and pigs under 25 kilograms tagged via an ear tag at every move to a new PIC.

Cattle, pigs, sheep and goats cannot be transported, sold, or otherwise disposed of without being appropriately tagged. Furthermore, if untagged cattle, sheep or goats are moved to another property, they should be tagged within 30 days of movement to that property. All NLIS tags on cattle and pigs should be able to be tracked to the carcass of the animal if slaughtered (it is not a requirement to track sheep and goat tags to the target, but four Victorian abattoirs are installing carcass tracking systems for commercial purposes²⁸).

Under the Regulations, owners of pigs, sheep, goats, horses, alpaca, llama, deer and poultry (except where the flock is less than 100 birds, or emus or ostriches where the flock is smaller than 10 birds) need to make an application to the Secretary for a PIC in writing. The application should contain the name, address, telephone number, email, details of the property, type of livestock, and if the property changed ownership in the last 12 months, as well as the name and details of the previous owner. Stock or station agents, or businesses dealing in the buying and selling of livestock or carcasses of livestock must also apply for a PIC.

The Regulations require that any:

- cattle from Queensland, Western Australia or the Northern Territory
- pigs from any area of Western Australia or Queensland north of the Tropic of Capricorn or from the Northern Territory, or
- bees, bee products or used beekeeping fittings

²⁷ Information provided by DEDJTR.

²⁸ Information provided by DEDJTR.

brought into Victoria, must be accompanied by a certificate completed by both their owner, which also needs to be forwarded to the Secretary within 48 hours of introduction. If livestock are from a quarantine area, they must not be introduced into Victoria without permission from the Secretary. The Regulations also prescribe that bees and certain bee products with American Foul Brood or from Tasmania not be introduced without specified treatments, and prescribes the method of hive branding, and disposal if required.

Notification requirements

The Regulations contain the obligation to report to inspectors any suspicion of disease in livestock within the specified time limits: without delay for diseases listed in Part A of Schedule 2 of the Regulations, within 12 hours for diseases listed in Part B, and within seven days for diseases listed in Part C. Notification must include details such as species of livestock, PIC, type of disease, number of deaths, descriptions of signs of disease, date, age, vet involvement, specimens submitted to a lab, and personal details. The person who makes the notification must keep the notification documents for seven years.

Testing requirements

The Regulations cover standards and requirements for the testing of samples or specimens. The owner or person in charge of premises registered as a veterinary diagnostic laboratory must ensure that any tests or analysis are carried out in accordance with:

- The standards relevant to that disease in the Australian and New Zealand Standard Diagnostic Procedures as approved by the Primary Industries Standing Committee as amended and in force from time to time.
- The standards relevant to that disease in the Australian Standard Diagnostic Techniques for Animal Diseases as published by the Standing Committee on Agriculture and Resource Management in 1993 as amended and in force from time to time.

Certain records from the testing must also be kept detailing thorough information on the specimen, testing regime and results, and who submitted it.

Records must be submitted to the Secretary by hand or electronic submission:

- in the case of a disease listed in Part A of Schedule 2, immediately after the test, analysis or diagnostic examination is completed
- in the case of a disease listed in Part B of Schedule 2, within 7 days after the test, analysis or diagnostic examination is completed
- in the case of an exotic disease, immediately after the test, analysis or diagnostic examination is completed.

The owner or person in charge of premises registered as a veterinary diagnostic laboratory must ensure that the facilities and operational practices of the laboratory comply with accreditation in accordance with AS ISO/IEC 17025—2005 General requirements for the competence of testing and calibration laboratories published 6 December 2005 as amended and in force from time to time.

Prevention and treatment of disease

The Regulations require that a person must not vaccinate any livestock against certain diseases unless the vaccine is administered by a person with written authorisation from the Secretary and the owner of the livestock obtains and complies with written authorisation from the Secretary, and provides the authorisation to the veterinarian or inspector who administers the vaccine. Livestock vaccinated against Ovine Johne's disease must be identified in the correct manner. If livestock show signs of disease or adverse reaction 48 hours after the administration of a vaccine, serum or diagnostic agent, the Secretary must be notified. Anyone authorised to be in possession of an exotic disease agent must keep it at the Australian Animal Health Laboratory, Geelong, or in another place and under conditions specified by the Secretary.

Artificial breeding of livestock²⁹

Any person who sells semen from prescribed livestock must keep detailed information regarding the sample, its storage and sale. Those people who hold a licence to sell semen must also certify the health of the livestock on the property in a certificate and statement, and forward these to the Secretary.

Compensation

The Regulations require that applications for compensation must be made in writing to the Secretary and include items such as statements from inspectors certifying each item of property which was ordered to be destroyed, and other details about the property. Applications for compensation for destruction of carcass must also be in writing to the Secretary and include certification of the details of the condemnation as well as other details of the livestock and property. All applications for compensation must be made within 30 days of destruction of property or products. The Regulations also require that the Victorian Farmers Federation, Australian Livestock Property Agents Limited and the Australian Meat Industry Council have a representative on the compensation committees for cattle, sheep, goats and pigs.

Record keeping and certification

The Regulations require that prescribed persons keep certain records with regard to the sale, purchase, slaughter of particular livestock:

- People selling cattle, sheep, goats, horses, pigs or deer must record and keep information such as details about the livestock and buyer, and provide such information to the buyer, and ensure that these records are available to an inspector for seven years after sale.
- People dealing with the purchase of cattle must ensure details about the livestock and seller are kept and provided to the seller of the livestock, and these records are available to an inspector for seven years after the purchase.
- If cattle are to be dispatched directly from the saleyard to an abattoir for slaughter or to a knackery for disposal within seven days after being sold or passed in:
 - A cattle scale operator or person who conducts a public auction of cattle at a saleyard must, for each head of cattle sold or passed in at that auction, provide to the operator of the saleyard by electronic means the origin and destination PICs and advice that the cattle are to be dispatched.
 - In any other case, they must provide the serial number on the vendor declaration, and the origin and destination PICs.
 - A person who conducts a public auction of cattle must also provide the above information to the operator of the saleyard in both cases.
 - The operator of the saleyard must forward this information to the Secretary.
- Any person who introduces cattle onto their property that have not been dispatched from a scale operation or public auction must record the movement information of the cattle being sold or passed in and provide it to the Secretary within seven days.
- Any person who dispatches cattle, sheep or goats from a property (unless they are the livestock manager) must provide the PIC or address from which they are being dispatched and details about the livestock to the destination livestock manager, public auctioneer, person conducting the abattoir or knackery or scale operator (in the case of cattle).
- Invoices issued under the Regulations must include detailed information about the livestock and sale of livestock.

²⁹ These requirements are currently inactive, as no livestock species have been prescribed.

Licences and administration

The Regulations prescribe several reasons for why licences may not be granted or renewed, such as unsuitable premises and the absence of precautions to prevent a disease. It also allows employees of municipal councils, members of the police force, operators of a saleyard, abattoir, etc. access the records kept by the Secretary. Fees and charges are also specified in connection with the impounding of livestock or property and the manner in which bee hives are to be disposed of is also detailed.

1.3.2 Orders under the Act

A number of Orders under the Act that are required to be renewed annually will be incorporated into the new Regulations (see Section 5 as well as Appendix D). The reason for incorporating Orders into the Regulations is to consolidate subordinate legislation in one place and increase administrative efficiency. Nonetheless, DEDJTR will not be able to incorporate all Orders made under the Act into the Regulations, as it is appropriate that some requirements remain in orders (ie those whose requirements may need to be changed relatively frequently or at short notice). For example, the Order Declaring Diseases and Exotic Diseases, which is the 'backbone' of the Act (as only diseases listed in this order are regulated by the Act) must remain an order as required by the Act and for flexibility considerations.

The orders made under the Act that will be incorporated into the Regulations are as follows:

- *Order Declaring a Control Area for Newcastle Disease (Virulent) and Prohibitions on the Entry of Chickens into Victoria*, which requires owners of commercial poultry in the Control Area (the whole of Victoria) to ensure their flock is vaccinated and certain records are maintained in relation to this vaccination.
- *Order Declaring a Control Area to Prevent, Control and Eradicate Menangle Virus and Bungowannah Virus*, which requires the vendor of a pig to provide an NVD or declaration under Section 18A of the *Stock (Seller Liability and Declarations) Act 1993*.
- *Notice for the Permanent Identification of Cattle*, which requires cattle to be identified with EID.
- *Exemption Order under Section 6(3A) - Cattle Identification*, which exempts certain persons under prescribed circumstances from the requirements to permanently identify cattle with EID.

The incorporation of these Orders into the Regulations is cost neutral as industry is already required to comply with them. Consultation with stakeholders indicated broad support for the requirements in the Orders. As these Orders have been in place for a number of years, DEDJTR has reviewed their effectiveness and efficiency, and has concluded that they should form part of the Regulations.

1.4 Performance of the Regulations

Victoria is considered the most vulnerable of Australian jurisdictions to a major disease outbreak due to its temperate climate and intensive livestock production systems. The opinion of the Victorian Auditor General's Office (VAGO) is that DEDJTR's response to recent small scale events has been speedy and successful.³⁰ However, it raised concerns about the ability of DEDJTR to deal with large scale outbreaks due to a decline in resourcing. In this context, concerns have been raised by stakeholders about the level of traceability of sheep and goats under the Regulations, which require Government to conduct labour-intensive enforcement and monitoring activities (in comparison to an automatic data-collection system such as that required for cattle).

³⁰ Victorian Auditor General, Biosecurity livestock, 2015.

In Ken Matthews's 2011 review of Australia's preparedness for a major FMD outbreak (commissioned by the then Commonwealth Department of Agriculture, Fisheries and Forestry), the review team questioned whether Government authorities around Australia were complacent about how quickly a disease outbreak would be detected, reported and traced. The review team highlighted the absence of effective arrangements for the identification and traceability of sheep. It pointed out that the electronic identification (EID) system used for cattle is achieving the targets set by DEDJTR and NLIS traceability standards, and stated that "the sheep industry's current mob-based and largely non-electronic systems are not capable of meeting the nationally agreed standards".³¹

1.5 Role of DEDJTR

Biosecurity is fundamental to the health, well-being and prosperity of Victoria. DEDJTR develops policy, standards, delivery systems and services that reduces the threat of invasive plants and animals to agriculture and the natural environment, protects animals and plants from pests and diseases, enhances food safety, ensures minimal and effective chemical use, protects the welfare of animals and preserves and expands market access for Victoria's primary industries.

Specifically in relation to livestock, DEDJTR provides high level scientific, policy and operational expertise within Victoria, at the national level and at times in the global market.

DEDJTR has a number of roles in the different emergencies that can impact the agricultural sector or animal welfare. As a control agency, DEDJTR manages outbreaks within Victoria and works with national partners through the Emergency Animal Disease Response Agreement (EADRA).

1.6 Coordination between state and Commonwealth governments

Victoria works closely with the Australian Government and state and territory government around Australia in relation to many animal biosecurity matters.

Victoria is part of the Intergovernmental Agreement on Biosecurity which aims to strengthen the working partnership between governments and to improve the national biosecurity system and minimise the impact of pests and disease on Australia's economy, environment and the community.

Victoria is a signatory to the EADRA, which imposes obligations on all signatories in relation to funding responses to emergency disease outbreaks. It is also a signatory to the Intergovernmental Agreement on Biosecurity (IGAB), which is an agreement between the Commonwealth and all state and territory governments, with the exception of Tasmania. The IGAB aims to strengthen the working partnership between governments and to improve the national biosecurity system and minimise the impact of pests and disease on Australia's economy, environment and the community. The National Biosecurity Committee (NBC) is the governing body tasked with identifying and implementing collaborative projects to meet the national priorities identified in the IGAB.

A core objective of the committee is to promote cooperation, coordination, consistency, and synergies across and between Australian governments. This includes exploring measures to:

- provide assurance that the system is working
- better connect the biosecurity rationale to market access and trade
- increase visibility and engagement with sectoral committees

³¹ Ken Matthews, A Review of Australia's preparedness for the threat of foot-and-mouth disease, 2011, P.3.

- engage, partner and communicate with relevant stakeholders, as required
- coordinate biosecurity investment in the national interest.

The NBC is supported by three sectoral committees that provide policy, technical and scientific advice on matters affecting their sector, covering all pests and disease risks to the terrestrial and aquatic (inland water and marine) animals and plants, and the environment:

- Animal Health Committee
- Plant Health Committee
- Marine Pest Sectoral Committee.

Relevant to this RIS is the Animal Health Committee whose main purpose is to develop science-based and nationally consistent policy on animal health issues, and to provide advice as necessary on animal health to National Biosecurity Committee.

Victoria is a member of these committees and provides significant contribution to biosecurity outcomes in Australia.³²

1.7 Structure of this report

This RIS is structured as follows:

- **Chapter 1** provides information on the scope of the RIS and the current regulatory framework.
- **Chapter 2** provides background information about the livestock industry in Victoria: its composition, size, value and importance to Victoria.
- **Chapter 3** describes the nature of the problems, the regulatory gap that currently exists and measures the extent of the problems.
- **Chapter 4** outlines the objectives of government.
- **Chapter 5** considers the options to address the problem in light of the government's objectives.
- **Chapter 6** sets out the analysis for each of the options.
- **Chapter 7** discusses the preferred option as well as its impact on small business, a competition assessment, any implementation and enforcement issues and an evaluation strategy.
- **Appendices** provide a summary of consultations undertaken, the proposed Regulations, a list of scheduled diseases and the orders that are proposed to be brought into the Regulations under the preferred option.

³² Agriculture Victoria, *Partnerships*, accessed 17 January 2016 <http://www.agriculture.gov.au/biosecurity/partnerships/>.

2 The livestock industry in Victoria

In 2014, the Victorian livestock sector was valued at approximately \$7.2 billion.³³ The sector is a significant contributor to Victoria's economic wellbeing. Furthermore, livestock and its related products represents 57 per cent of the total gross value of commodities produced by the entire Victorian agricultural sector.

The gross value of livestock commodities is provided in Table 4.

Table 4: Gross value of agricultural products in Victoria 2014-15

Commodity	Gross Value of Agricultural Commodity Produced, Victoria, 2014-2015 (\$m)	Percentage of Australian total
Cattle and calves	2,012	17%
Sheep and lambs	1,352	41%
Pigs	266	23%
Poultry	618	24%
Other	56	36%
Livestock meat total	4,304	22%
Wool	667	25%
Milk	3,009	64%
Eggs	151	21%
Livestock products total	3,826	47%
All livestock total	8,130	30%

Source: ABS, Value of Agricultural Commodities Produced, Australia, 2014-15, cat.no. 7503.0, 2015.

Cattle and calves, together with milk contribute the most value to the sector, constituting 21 per cent and 44 per cent of the total value of the sector respectively.

The livestock industry can be further segmented into the meat and dairy components which are the main two contributors measured by value-add.

2.1 Meat

In 2015-2016, Victoria exported:

- 221,000 tonnes of beef (in both live animal and fresh or frozen form) worth \$1,329 million
- 187,000 tonnes of sheep worth \$958 million
- 53,000 tonne of offal worth \$184 million.

These products represent the three largest components of Victoria's meat exports (Table 5).

³³ ABS, Value of Agricultural Commodities Produced, Australia, 2013-14, CAT. 7503.0, 2015.

Table 5: Value of Victorian meat exports by product category (\$ million)

Export Product	2011-12	2012-13	2013-14	2014-15	2015-16	% of Total
Beef	605	653	1,022	1,556	1,329	48%
Sheep meat	610	689	897	1,063	958	35%
Offal	133	136	174	198	184	7%
Other prepared meat products	57	73	63	112	99	4%
Alternative meat	48	67	97	105	98	4%
Animal fats	65	63	48	43	60	2%
Poultry	17	18	23	21	17	1%
Pig meat	21	16	16	20	32	1%
Total Victoria	1,555	1,716	2,338	3,118	2,776	100%

Source: DEDJTR, Victorian Food and Fibre Export Performance Report 2015-16, 2016, p.16.

High production levels over recent years have slowed and the decline in exports from 2014-15 to 2015-16 was largely a result of lower levels of supply.³⁴

The majority of Victoria's meat export revenue comes from its trade with USA, China, Japan, Indonesia and South Korea. Export revenue from these countries comprised 58 per cent of total exports (by value) in 2014-15. Export volumes have grown across all countries listed below from 2010 to 2015, except in Indonesia. This reflects a growing demand for Australian meat, particularly in the Asian region (Table 6).

Table 6: Value of Victorian meat exports by destination (\$million)

Country	2010-11	2011-12	2012-13	2013-14	2014-15	% Total
USA	229	230	276	447	887	28%
China	122	107	213	360	449	14%
Japan	177	151	138	181	222	7%
Indonesia	106	80	87	133	148	5%
South Korea	74	61	62	96	133	4%
United Arab Emirates	98	86	86	93	125	4%
Saudi Arabia	46	43	59	89	106	3%
Malaysia	60	66	64	112	105	3%
Qatar	37	42	51	58	82	3%
Papua New Guinea	48	53	60	64	75	2%

Source: DEDJTR, Victorian Food and Fibre Export Performance Report 2014-15, 2015, p.15.

In the case of the beef industry, smaller and younger animals are supplied to the domestic market and premium quality animals are exported to Japan and Korea. Beef exports and production decisions are predominantly influenced by seasonal conditions in conjunction with domestic and foreign demand and input prices.³⁵

There are a number of key developments which have affected the performance of the industry.

- Recently, USA demand for Australian (and Victorian) meat has increased due to a number of factors. These include the depreciation of the Australian dollar (relative to the

³⁴ DEDJTR, Victorian Food and Fibre Export Performance Report 2015-16, 2016, p.16.

³⁵ DEDJTR, Beef Industry Profile, December 2014, 2014, p.1.

USA dollar), consumer preferences pivoting towards Victoria’s premium pasture-fed beef and a drought of domestic beef supply.³⁶

- Another positive development for the livestock industry in Victoria was announced by the Victorian Government on 11 January 2016. This announcement centred on a new \$21 million livestock exchange facility to be developed near Ballarat. The new facility will have capacity for 70,000 cattle and 1.6 million sheep annually which is expected to modernise operations, increase capacity, create an additional 126 direct and indirect jobs, and generate a total economic activity boost for the Ballarat region of more than \$46 million over the course of the project.³⁷
- Three recent trade agreements also significantly increase growth prospects for the Victorian meat industry. The Japan-Australia Free Trade Agreement will gradually reduce the 38.5 per cent tariff on beef to 19 per cent over 18 years, while the fresh beef tariff will reduce by 15.5 per cent to 23 percent over the next 15 years. Korean tariffs imposed on beef will be reduced from 40 to 0 percent by 2028 with the sheep meat tariff (22.5 per cent currently) to be removed. China will remove all tariffs on beef over the next nine years (currently 9-25 per cent) and will eliminate sheep and goat meat tariffs in the next eight years (ranging from 9-23 per cent). These trade agreements will have both a positive and direct impact on the Victorian meat sector in the coming two decades, by allowing Victorian producers and firms to be more competitive in export markets due to tariff reduction.

In addition to the large export and domestic markets for Victorian meat, the livestock industry contributes to Victoria’s economy through its employment figures. The beef cattle industry, and ancillary meat processing industry form a majority of employment associated with livestock in Victoria, totalling approximately 23,500 in 2011 (in line with last Census) (Table 7). This shows that the meat industry plays an important role in the well-being and income-earning capacity of a large number of Victorians.

Table 7: Victorian employment by areas of meat industry

Industry	Number Employed
Beef cattle	14,494 (2010-11) ³⁸
Meat processing (abattoirs and packing facilities)	Approximately 9,000 ³⁹
Sheep farming	5,043 ⁴⁰
Pig farms, deer farms and farms producing ‘other livestock’	1,878 ⁴¹
Poultry farms	1,522 ⁴²
Manufacturing of poultry products	2660 ⁴³

2.2 Dairy

Victoria produces 66 per cent (6.12 billion litres) of the total milk production in Australia with Victoria’s dairy exports valued at \$2 billion in 2014-15 (Table 8).^{44 45}

³⁶ DEDJTR, *Victorian Food and Fibre Export Performance Report 2014-15*, 2016, p.14.

³⁷ <http://www.premier.vic.gov.au/new-ballarat-livestock-exchange-given-the-greenlight/>

³⁸ DEDJTR, *Beef Industry Profile, December 2014*, 2014, p.4

³⁹ Ibid.

⁴⁰ DEDJTR, *Sheep Industry Profile, December 2014*, 2014, p.5 (based on 2011 Census)

⁴¹ DEDJTR, *Pig, Goat and Deer Industry Profile December 2014*, 2014, p.6 (based on 2011 Census)

⁴² DEDJTR, *Chicken Industry Profile December 2014*, 2014, p.6 (based on 2011 Census)

⁴³ DEDJTR, *Eggs Industry Profile December 2014*, 2014, p.6 (based on 2011 Census)

Victoria possesses ideal conditions for dairy production with reliable rainfall and well-irrigated areas. High quality pastures are also supplemented with relatively low input feed costs that continuously drive productivity improvements.⁴⁶

Victoria's largest export product categories are milk and cream, together with cheese and whey products, which have a combined value of \$1.8 billion in 2014-15.

**Table 8: Value of Victorian dairy exports by product category and item:
A\$ million**

Product	2010-11	2011-12	2012-13	2013-14	2014-15	% Total
Milk and cream	980	947	848	1,250	1,055	52%
Cheese and whey Products	640	694	763	723	748	37%
Butters, fats and oils	229	179	168	224	176	9%
Yoghurt and fermented milk products	42	39	42	55	45	2%
Milk extracts	6	24	45	41	9	0%
Total Victoria	1,897	1,883	1,866	2,293	2,032	100%

Source: DEDJTR, Victorian Food and Fibre Export Performance Report 2014-15, 2015, p.16.

The top five export destinations for Victorian dairy producers are Japan, China, Indonesia, Singapore and Malaysia. Japan has traditionally been Victoria's highest value export partner for dairy, until it was overtaken by China in 2013-2014. However, the value of Chinese exports dropped in 2014-2015, following a drop in Chinese demand, meaning that Japan was again Victoria's number one destination for dairy exports, with a total export demand value of A\$401 million (Table 9).

DEDJTR considers that the prospects for the industry are extremely positive due to the clear brand quality and recognition of Victorian-produced milk in rapidly growing Asian markets. The Victorian government has assisted the industry's expansion through the Food to Asia Action Plan, which is designed to increase the industry's resources in growing Asian markets. The program will continue to create and strengthen the people-to-people and business-to-business connection between Victorian businesses and buyers and investors in Asia⁴⁷.

⁴⁴ DEDJTR, *Dairy Industry Profile December 2014*, 2014, p.1.

⁴⁵ DEDJTR, Victorian Food and Fibre Export Performance Report 2014-15, 2016, p.16.

⁴⁶ Ibid.

⁴⁷ DEDJTR, *Dairy Industry Profile December 2014*, 2014, p.6.

Table 9: Value of Victorian dairy exports by destination: A\$ million

Destination	2010–11	2011–12	2012–13	2013–14	2014–15	% Total
Japan	328	411	435	359	401	20%
China	134	132	173	368	233	11%
Indonesia	144	133	120	193	197	10%
Singapore	179	189	174	220	187	9%
Malaysia	72	91	102	135	127	6%
Philippines	90	62	63	77	83	4%
Thailand	78	69	76	102	83	4%
South Korea	92	87	70	69	69	3%
Hong Kong	54	61	61	67	63	3%
Saudi Arabia	101	71	64	83	57	3%

Source DEDJTR, Victorian Food and Fibre Export Performance Report 2014-15, p.17.

The dairy industry and ancillary processing sector employ approximately 20,000 people. Importantly, these figures do not account for the number employed in related services including R&D and logistics, which are largely dependent on the dairy industry (Table 10).

Table 10: Employment by dairy industry segments

Industry	Number employed
Dairy Production	10,600 ⁴⁸ (2010-11)
Dairy Processing Sector	9,300

Source: DEDJTR, Dairy Industry Profile December 2014, 2014, p.6.

2.3 Number of farms and livestock

There are thousands of properties across Victoria where livestock are being farmed. In terms of commercial operations, the greatest number of individual farms are used for grazing cattle specifically for meat production (approximately 15,000 locations) (Table 11). The second largest number of properties is for sheep and lambs (10,600 properties), followed by establishments involved in dairy production (4,000)⁴⁹. There are also approximately 1,500 poultry-related establishments. The fewest number of establishments are related to pigs, however this ABS classification does not encompass other livestock covered in the Regulations such as horses, bees and aquaculture, and also does not include small scale and non-commercial operations. When small scale and non-commercial operations are also included the total number according to DEDJTRs property register is closer to 75,000.

⁴⁸ DEDJTR, Dairy Industry Profile December 2014, 2014, p.6 (based on the 2011 Census).

⁴⁹ Information provided by DEDJTR.

Table 11: Number of Victorian establishments with agricultural activity (2013-14)

Type of agricultural establishment	Number (2013-2014)	Total
Livestock – sheep and lambs	10,634	29%
Livestock – dairy cattle	5,257	14%
Livestock – meat cattle	14,956	41%
Livestock – pigs	396	1%
Livestock – poultry (eggs)	1,162	3%
Livestock – poultry (meat)	361	1%
Livestock – all other livestock n.e.c. (no.) (includes horses, goats, domesticated buffaloes)	3,657	10%
Total	36,423	100%

Source: Agricultural Commodities, Australia 2013-2014. Cat. No. 7121.0, 2015.

Table 12 shows that there were approximately 25.6 million livestock in Victoria in 2013. Sheep and lambs comprised 60 per cent of this figure, poultry (both eggs and meat) over 20 per cent and over 15 per cent was made up by both types of cattle.

Table 12: Number of animals in Victoria (2013-14)

Type of animal	Number (2013-2014)	Total
Livestock – sheep and lambs	15,365,155	60%
Livestock – dairy cattle	1,789,523	7%
Livestock – meat cattle	2,428,169	9%
Livestock - pigs	544,506	2%
Livestock – poultry (eggs)	3,669,798	14%
Livestock – poultry (meat)	1,710,280	7%
Livestock – all other livestock n.e.c. (no.) (includes horses, goats, domesticated buffaloes)	132,549	1%
Total	25,639,980	100%

Source: Agricultural Commodities, Australia 2013-2014. Cat. No. 7121.0, 2015

Note: Estimates are not made of the number of goats in Victoria, but rather are integrated into the number of 'livestock – all other livestock' as per Table 12.

Note: It is believed by Department experts that these numbers are likely to be an underestimate and that the actual number is higher.

2.4 Apiary (bee) and aquaculture industries

It is worth noting that the disease impacts borne by producers in general are also borne by traditionally smaller industries; for example, the bee industry. The Australian apiary industry is currently composed of approximately 12,000 registered beekeepers, producing output of \$90 million annually. Furthermore, pollination services have large positive externalities on other agricultural industries, and thus it is estimated that it contributes \$620 million to \$1,730 million to the value of Australian agriculture each year.⁵⁰

The Australian aquaculture, industry was worth over \$1 billion in 2012-13. Growth has been primary driven by farmed salmonids and edible oysters.⁵¹ The Regulations have a minimal

⁵⁰ Department of Agriculture and Water Resources, <http://www.agriculture.gov.au/pests-diseases-weeds/bees>, accessed 13 January 2016.

⁵¹ Department of Agriculture and Water Resources, <http://www.agriculture.gov.au/fisheries/aquaculture/aquaculture-industry-in-australia>, accessed 12 January 2017.

impact on the aquaculture industry, covering the requirement to notify the Secretary within seven days if any one of six aquaculture related diseases is detected.

3 Nature and extent of the problem

The following chapter describes the nature of the problems and the regulatory gap that exists in the absence of disease control regulation and attempts to measure the extent of the problems, where data is available.

3.1 Risks to the livestock industry

3.1.1 Diseases

The key risk addressed by the Act and the Regulations is the threat of livestock disease occurring in Victoria and managing the potential consequences of a disease outbreak. A disease outbreak can directly impact on livestock (and thus Australia's biosecurity) as well as people (who may be infected by diseased animals). There are also significant potential flow-on impacts from a disease outbreak which are discussed later in the chapter.

In terms of direct impacts, the ABARE report into the value of Australia's biosecurity system at the farm gate estimated that

“a foot-and-mouth disease (FMD) incursion is estimated to have the largest impact, reducing the gross margins of livestock enterprises by between 52 percent for beef enterprises to more than 100 per cent for pig enterprises (Figure 1). Pig production would be unprofitable in the event that FMD became endemic, with losses exceeding 100 per cent.”⁵²

The costs of disease to various livestock industry stakeholders such as producers, the industry as a whole, related industries and various communities are discussed in Section 3.2.

There are a range of diseases which can potentially impact on the production of Victorian livestock and the health and wellbeing of the general public. Several livestock diseases are zoonotic (can be transmitted between animals and humans) but the rate of transmission and effects on humans vary.

The main diseases which can affect livestock are split into two categories:

- **Exotic diseases:** These are diseases defined in the Act as any contagious or infectious disease or condition not normally found in Australia (for example FMD and rabies) to which any livestock is subject (as declared) in the relevant Orders (see Appendices).⁵³ Diseases which are explicitly defined as exotic include foot and mouth disease and rabies. This class of diseases is considered the greatest threat to the livestock industry in Victoria.
- **Endemic diseases:** This term generally refers to diseases which are frequently present and well-established in a specific region or population. The negative consequences from endemic diseases are not considered to be as significant as those from exotic diseases.

There are many diseases which can infect different types of livestock which are the subject of this report, with over 45 individual diseases listed in Schedule 1, split into Diseases of Mammals and Birds, Diseases of Bees and Diseases of Fish. Severity and contagion of disease

⁵² ABARES, The value of Australia's biosecurity system at the farm gate An analysis of avoided trade and on-farm impacts

Ahmed Hafi, Donkor Addai, Kyann Zhang and Emily M Gray, Research report 15.2, June 2015. Viewed at: http://data.daff.gov.au/data/warehouse/9aab/2015/fgvbsd9aab/FarmGateValueBiosecServices_v1.0.o.pdf

⁵³ 'Exotic diseases' is defined in the Act and specific exotic diseases to which the Act applies are determined by an Order made by the Governor in Council.

differs across species and disease. For example, pigs are highly susceptible to FMD and produce large amounts of the virus through the respiratory route, which can infect other species. In contrast the impact on cattle depends on the strain, and sheep often do not show clinical signs. Other diseases such as rabies have varying effects across species but all ultimately result in death.

In Schedule 2, there are over 85 diseases alone for exotic diseases for mammals and birds. Excluding mammals and birds there are over 45 exotic diseases which threaten bees, fin fish, molluscs and crustacea.

High priority diseases include both endemic diseases such as Anthrax and exotic diseases such as Avian Influenza and FMD. In particular, FMD has been assessed to have a particularly catastrophic potential impact in the case of a severe outbreak.

A number of the listed diseases, both exotic and endemic, can also impact on human health, for example:⁵⁴

- Anthrax is an acute bacterial disease caused by *Bacillus anthracis* that is a serious zoonotic disease. The causes of human anthrax can be directly linked to contact with infected animals. Most at risk are people working with carcasses especially animals that died suddenly - for example knackery workers, farmers, stock inspectors and veterinarians.
- Bovine brucellosis is a serious zoonotic disease caused by *Brucella abortus* that has been eradicated from Australia via the Brucellosis and Tuberculosis Eradication Campaign (BTEC). Brucellosis in humans can also be caused by another species *Brucella suis*, which is transmitted from pigs, often feral pigs, and causes a severe "flu like" disease.
- Bovine tuberculosis has been eradicated in Australia through the Brucellosis and Tuberculosis Eradication Campaign (BTEC) however, this very serious zoonosis is still present in many overseas countries, and there is a risk that it could be reintroduced. The pasteurisation of milk helps to prevent the spread of bovine tuberculosis to humans
- *Cryptosporidiosis* is caused by a protozoan that is carried in the gut of a number of livestock species including calves, lambs, goats and deer. It is shed in faeces and transmitted to humans either through direct contact with dung or via contaminated drinking water.
- *E. coli* O157 is a bacterium that is part of the normal gut flora of cattle, sheep, goats, pets and wild birds. These animals carry it without causing disease however when humans are infected the toxins that the bacteria produce can cause serious illness. This can range from diarrhoea to kidney failure and fatal cases have been reported.
- Leptospirosis is another bacterial disease spread by the inhalation of organisms in aerosolised urine droplets, or by direct exposure to the organism from the urine of infected animals. The people at highest risk for this disease include dairy farmers, piggery workers and stock transporters, but any person handling livestock or native wildlife is at risk. Affected people generally suffer an acute onset of headache, fever and occasionally conjunctivitis, vomiting or abdominal pain. Affected animals may be asymptomatic carriers, or show signs of clinical disease including blood tinged urine, jaundice and eventual death.
- Salmonella is a major cause of gastroenteritis in humans. Most cases occur after consumption of contaminated food but infection can be contracted directly from animals especially if they have clinical salmonellosis. In these circumstances it is very important to reduce exposure as much as possible and to practice high levels of personal hygiene. This can be transferred from animal faeces for instance, and can cause symptoms like upset stomach, fever, diarrhoea and vomiting in humans.

⁵⁴ Agriculture Victoria, 'Zoonoses', <http://agriculture.vic.gov.au/agriculture/pests-diseases-and-weeds/animal-diseases/zoonoses/zoonoses-animal-diseases-that-may-also-affect-humans>.

- Orf (scabby mouth, contagious ecthyma) is caused by a poxvirus and is a common disease of sheep in Australia. It is effectively prevented by vaccination of sheep with a live virus into the bare inguinal area. Lesions in people typically occur on the hands, when the virus from an infected sheep scab or the vaccine enters a cut or scratch, but lesions can then spread to the face and body if other areas are scratched and exposed to the virus.
- Q-fever is a disease caused by an organism named *Coxiella burnetii*. The clinical signs of this disease in humans range from no noticeable signs, to a severe flu like syndrome that may last for months. It is spread by inhalation of the organism from the placental fluids and urine of sheep, goats, cattle and native animals (i.e. bandicoots, wallabies etc.). Affected animals appear normal. The people most at risk of contracting this disease are abattoir workers (particularly those dealing with foetuses), veterinarians, shearers and farm workers.
- *Streptococcus suis* is a bacterial infection carried by pigs that may be apparently healthy. Humans are infected most often through skin wounds or rarely by inhalation. The disease caused can include meningitis and be fatal.
- *Yersinia enterocolitica* is a bacterium that can replicate at refrigerator temperatures and exists as a number of different subgroups called serotypes. Serotype 3 and 9 cause most of the disease in humans and are zoonotic agents that are common in dogs, cats and pigs. Transmission to humans occurs through contact with a household pet that is shedding the bacterium in their faeces, by similar direct contact with pigs or by consumption of undercooked pork.

The full list of diseases which threaten specific animal classes is contained in the Schedules of the Order G36 made by Governor in Council, updated on 8 September 2016. This list is the official disease list in the Act. 'Endemic diseases' are listed in Schedule 1 and the specific 'exotic' diseases are listed in Schedule 2 (see Appendix E).

3.1.2 Livestock disease risk factors

There are clear and well-researched factors which contribute to the risk and severity of a contagious disease outbreak in livestock. These are discussed below.

Transmission of disease through breeding programs

When new genetic material is introduced for diversity and to improve productive capacity, this increases the risk of disease occurring.⁵⁵ The health history and quality of the stock when beginning a breeding program, for instance, is critical in determining the likelihood of disease. This includes when sourcing semen, ova and embryos. These materials may be contaminated if the source has not undergone the required rigorous tests. Furthermore, a key determinant as to the extent of this risk is knowledge of an animal's origin and genetic history.

Transmission of disease through movement of livestock

Another key risk factor in an outbreak and spread of a livestock disease is the movement and mixing of infected animals with healthy animals along the supply chain. The movement of infected livestock has resulted in the introduction of a disease into production areas with disease free status.⁵⁶ Large volumes of livestock moving along the supply chain can elevate risk of infection in livestock (see Figure 2). The principle of minimising mixing to minimise disease risk, is reflected in the livestock management approach for dairy and beef cattle where the cattle remain separate and are not grazed on the same pasture. DEDJTR provides

⁵⁵ DEDJTR, *Biosecurity-A practical Approach for Beef Herds*, 2008 <http://agriculture.vic.gov.au/agriculture/livestock/beef/beef-health-and-welfare/biosecurity-a-practical-approach-for-beef-herds>.

⁵⁶ Eric Fevre, Barend Bronsvort, Katie Hamilton and Sarah Cleaveland, 'Animal movements and the spread of infectious diseases', *TRENDS in Microbiology*, vol.14 No.3, March 2006.

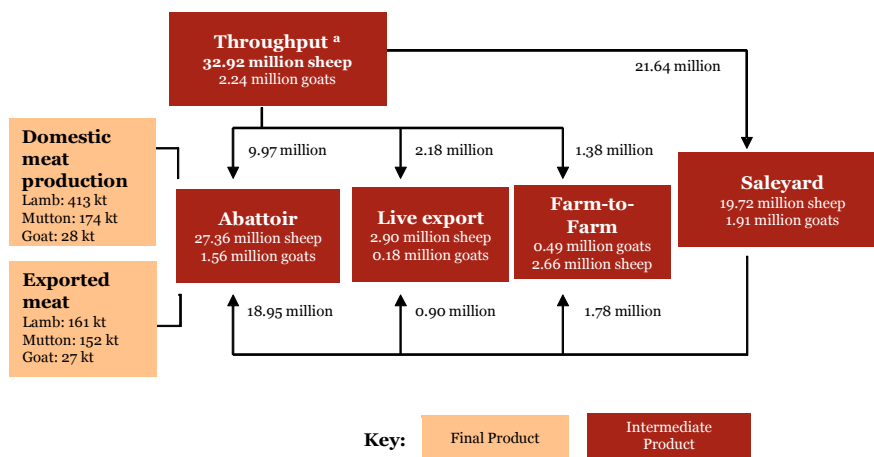
information and checklists to producers to encourage them to go beyond the requirements in the Regulations.⁵⁷ Livestock management practices that may reduce the incidence or severity of livestock disease include:

- ensuring other animals on the farm (such as pets) are registered and monitored
- keeping records of where feed was sourced
- routine vaccination
- reducing stress on animals
- utilising feedback (including electronic data) from processors (made easier through EID and the NLIS).

However, consultation with stakeholders indicated that some producers do not necessarily undertake these additional activities.

Figure 2 -ows that in practice there is a significant amount of movement along the livestock supply chain.

Figure 2: Number of sheep and goats moving through the supply chain, annual average 2007-8 to 2011-12, Australia



Source: ABARES, Implementation of improvements of the NLIS for sheep and goats: Decision RIS, 2014, p.3. Date Sources: ABARES estimates adapted from CIE 2010. Data from ABARES 2012a; ABS 2012a; DAFF 2012; Foster forthcoming.

^a Throughput is defined as the average number of animals directly sold off farms that move through the supply chain each year. Throughput only accounts for the first movement of sheep and goats sold directly off farms and does not include the number of animals sold onward from saleyards'. Source: ABARES, Implementation of improvements of the NLIS for sheep and goats: Decision RIS, 2014, p.3.

While Figure 2 ntains specific figures for sheep and goats, some other livestock types, in particular cattle, share a similar degree of movement and interconnectedness. This interconnectedness, often from multiple sources means that if a disease is detected at some point in the supply chain, it is more difficult to identify the original source of the disease outbreak.⁵⁸ The large volumes of livestock moving between different sites elevates the risk of

⁵⁷ DEDJTR, 'Livestock Management', <http://agriculture.vic.gov.au/agriculture/farm-management/legal-information-for-victorian-landholders/livestock-management>, accessed 19 December 2016.

⁵⁸ The Regulations implicitly recognise mixing as a risk factor, through making exemptions from the requirements of section 9A(1)(a) and 9A(1)(b) of the Act and regulation 21(1)(a) of the Regulation with respect to:

- Cattle that remain continuously on their property of birth; or
- Cattle that are less than six weeks of age that are consigned directly to a knackery for disposal and that have a transaction tail tag or calf ear tag affixed in accordance with section 9(a); or
- Cattle moved in accordance with a permit issued by an Inspector of Livestock employed by the Department of Primary Industries and accompanied by an accurate and fully completed Vendor Declaration.

infection, and therefore, significant mixing of livestock in saleyards can contribute significantly to the spreading of disease.

Transmission of livestock diseases by other mammals, insects, feed and water etc.

The supply chain shown in Figure 1 can become contaminated; for example, by residual faecal matter. This is also true in the case of visitors and veterinarians who are in frequent contact with animals and whose clothes may carry diseases. Another pathway is via contaminated feed and drinking water.

Water can become contaminated by birds, animal droppings, animal carcasses or run-off from bare paddocks, intensive livestock industries or sewerage waste. This can result in decreased production, disease or deaths in livestock. Botulism and salmonellosis are two livestock diseases that may result from contamination of water with organic matter.

Feed can also be a source of disease for livestock. If livestock consume unsuitable feed it may cause sickness or death and may make their meat, milk and eggs unsuitable for human consumption. Potential feed-related health problems include metabolic conditions (acidosis, ketosis, milk fever); disorders related to forage and grazing management (grass tetany, bloat, nitrate, prussic acid, plant poisoning); and ill-health or death from feed contamination (botulism, aflatoxins and ergot).

In general, cleanliness is an important risk driver, particularly in the case of vehicles and machinery that transport stock along the supply chain. Furthermore, when there are large volumes of livestock moving across different sites this elevates livestock's risk of infection. As discussed in Section 3.1.2, mixing different livestock types leads to increased risk of contagion. Mixing can also refer to intermingling of multiple species of animals. Often vermin including dogs, foxes, cats, rats and mice can transmit diseases to livestock and thus cleanliness at all points of the supply chain can influence the likelihood of disease occurring. This is also the case with insects such as flies and mosquitoes which can carry diseases such as pink eye and blood borne diseases.⁵⁹

Primary producers have a direct private incentive to maintain good farm practices to reduce transmission of diseases from animals other than livestock (for example, dogs and vermin), as their animals will be most directly and acutely affected. In comparison, producers have less private incentive to reduce transmission of livestock disease from a producer's animals to other livestock where their animals are already affected. The latter problem is the one in which the Regulations attempt to address.

Timeliness for reporting livestock disease symptoms

Time is perhaps the most important factor which determines the likelihood of a severe outbreak of disease affecting many animals. The time taken to identify that an animal is infected, and the subsequent time taken in responding to the identification by necessary quarantine measures determines how far the disease can spread before it is contained. It also determines the number of animals that can be infected. Critically, as identified by the Food and Agriculture Organisation the early warning of diseases (ie rapid detection) can actually prevent and moderate the serious socio-economic effects of a potential disease outbreak.

3.1.3 Chemical contamination

Chemical residue is also a risk factor for the livestock industry and incidents involving chemical contamination occur more frequently in the livestock industry than disease outbreaks. Although major incidents are rare, there is a risk of severe impacts, for example, a

The significance of these exemptions is that they recognise that there is relatively less risk of disease occurring when livestock are not mixed.

⁵⁹ DEDJTR, 'Livestock Management', <http://agriculture.vic.gov.au/agriculture/farm-management/legal-information-for-victorian-landholders/livestock-management>, accessed 19 December 2016. Ibid.

1994 incident involving chlorfluazuron (an approved insect development inhibitor type insecticide) that caused economic loss to beef producers of around \$100 million.⁶⁰ Chemical contamination is a more frequent problem in the livestock industry than disease outbreaks.

Chemical contaminations occur for a variety of reasons including, but not limited to:

- pesticides and herbicides
- soil contamination
- water contamination
- feed contamination.

The quality of meat product from a contaminated animal is lower than a non-contaminated animal. Overseas markets including Japan and the EU do not accept livestock products that have been contaminated with chemicals above their maximum residue limit.

Chemical contamination does not spread as easily among animals compared to livestock disease. As such, while traceability is useful in monitoring the spread of affected livestock, the main purpose of traceability mechanisms is to prevent major disease outbreaks rather than chemical contamination.

3.1.4 Animal welfare

Other risks relevant to the livestock industry include the risk of harm to the animals themselves from poor practices or maltreatment (animal welfare issues). Two key animal welfare concerns often expressed by animal welfare groups are associated with the welfare of animals as they move through the supply chain for slaughter and the welfare of animals sent for live export.

The first concern regards supply chain management for domestic slaughter production, with animal welfare groups advocating for EID to help to identify leaks in the supply chain where small numbers of animals are lost. Furthermore, greater clarity of transit times and greater ability to mitigate the severity of disease outbreaks would also achieve significant animal welfare benefits.

The second relates to animals that are live exported and are subject to the Exporter Supply Chain Assurance Scheme (ESCAS). The concern being that selection and certification requirements are, at times, poorly conducted. A traceability option such as EID could significantly improve this process by forcing exporters to collect and upload information to the NLS database, thereby making it easier for government to monitor movements.

3.2 Livestock disease and health impacts

Livestock disease outbreaks have broad ranging impacts on production, market access, the reputation of the industry with local and international trading partners and consumers.

3.2.1 Impact on producers

The outbreak of a disease in livestock would lead to a direct loss in production. Productivity would be reduced due to the following factors:

- Firstly, animals may need to be destroyed, resulting in lost production, additional costs associated with the slaughter of animals and the associated foregone revenue. For example, an outbreak of avian flu in Vietnam in 2005 resulted in approximately

⁶⁰ Information provided by DEDJTR.

44 million birds (17 per cent of poultry population of Vietnam) being destroyed, at a cost estimate of US\$120 million.⁶¹

- A secondary (relatively minor) impact is that existing animals may be less productive, due to lower quality or yield as a result of being diseased. For example, FMD has been shown to be responsible for reduced milk production⁶², accounting for 33 per cent of the total losses due to FMD in Kenya in the 1980s.⁶³ Furthermore, any costs of avoidance (such as abortion and reduced rates of conception) in combination with a direct increase in control costs, such as vaccinations, population culling and other forms of control are generally borne by producers.⁶⁴

The impact of disease on producers is not limited to livestock. Currently, the list of diseases which may infect bees and impact on the apiary industry include:

- Tropilaelaps mite (*Tropilaelaps clareae* and *Tropilaelops mercedesae*)
- Tracheal mite (*Acarapis woodi*)
- Braula fly (*Braula coeca*)
- American foulbrood (*Paenibacillus larvae*)
- European foulbrood (*Melisococcus plutonius*)
- Chalk brood disease
- Varroosis (*destructor* and *jacobsoni*).⁶⁵

An outbreak of Varroa mite could decimate Australia's feral bee population, costing Australian plant industries between \$21.3 million and \$50.3 million per year over thirty years.⁶⁶

Aquaculture diseases also pose risks to a growing industry. The Pacific Oyster Mortality Syndrome (POMS) has negatively impacted the industry in NSW (since 2010), Europe and New Zealand. Whilst it is not harmful to humans, it has caused large stock losses.⁶⁷ Another example of an aquatic disease is the Abalone Virus *Ganglioneuritis*, which appeared in Victoria (2005) and Tasmania (2008). In Victoria, the virus caused a widespread death of wild abalone.⁶⁸

⁶¹ World Bank, <http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:20954941~pagePK:64257043~piPK:437376~theSitePK:4607,00.html>, [accessed 11 January 2016].

⁶² Bayissa B., Ayelet G., Kyule M., Jibril Y., Gelaye E. Study on seroprevalence, risk factors, and economic impact of foot-and-mouth disease in Borena pastoral and agro-pastoral system, southern Ethiopia. *Trop. Anim. Health Prod.* 2011;43:759–766.

⁶³ Ellis P.R., Putt S.N.H. *Pan Livestock Services*; Reading, UK: 1981. *The Epidemiological and Economic Implications of the Foot and Mouth Disease Vaccination Programme in Kenya.*

⁶⁴ World Bank, <http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:20954941~pagePK:64257043~piPK:437376~theSitePK:4607,00.html>, [accessed 11 January 2016].

⁶⁵ World Bank, <http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:20954941~pagePK:64257043~piPK:437376~theSitePK:4607,00.html>, [accessed 11 January 2016].

⁶⁶ CSIRO Submission no. 33, p.10, to the House of Representatives Standing Committee Inquiry into the Future Development of the Australian Honeybee Industry.

⁶⁷ Government of South Australia Primary Industries and Regions SA, http://pir.sa.gov.au/biosecurity/aquatics/aquatic_diseases/pacific_oyster_mortality_syndrome, [accessed 13 January 2016].

⁶⁸ Government of South Australia Primary Industries and Regions SA, http://pir.sa.gov.au/biosecurity/aquatics/aquatic_diseases/abalone_virus, [accessed 13 January].

3.2.2 Industry-wide

In addition to the costs of producers, there are significantly greater industry costs in the case of an outbreak, and therefore there would be underinvestment given what is warranted by the severity of the risk.

All points along the livestock supply chain from producers to transporters, saleyards, abattoirs and knackeries can be affected by disease outbreaks. This is because there is a collective reduction in productivity.

For example, the impact of foot and mouth disease (FMD) on production losses in regions of the world where the disease is endemic is estimated to range from US\$6.5 billion to US\$21 billion annually, with outbreaks in regions (countries) where the disease is exotic costing around US\$ 1.5 billion per annum.⁶⁹

These costs can be attributed to declining animal health, the quarantining and destruction of animals that may or may not be infected, reduced quality of products and being unable to trade in international and domestic markets. Importantly, these impacts are born by the entire industry and often not just at a state level, but also have significant impacts at a national-level. Given the significant flow-on effects of a livestock disease outbreak, all stakeholders in the livestock value supply chain are affected.

The livestock industry as a whole bears the cost of a disease outbreak, as all components of the supply chain, rely on actual and effective demand for livestock-related services and products. That is, a disease outbreak in one area of the supply chain has a direct and significant impact on other areas, both the upstream (e.g. inputs and genetic resources) and downstream (e.g. abattoirs, processing and sales).⁷⁰

Moreover, both domestic and international consumers are sensitive to the presence of disease in meat products and thus are readily willing to substitute affected products for other protein-products, causing significant losses to the entire supply chain.⁷¹ This consumer sensitivity even exists in cases where there is no risk associated with the disease – such as the incorrect public perception of a food risk when the avian flu was perceived to affect poultry in Italy, causing a 70 per cent reduction in poultry and egg consumption.⁷² Thus the sensitivity of consumers can augment the damage to an industry in turmoil in following a report of a livestock disease outbreak. This means that any outbreak that affects the industry, can also have a significant impact on consumer choice and add further reputational harm, as consumers do not necessarily discriminate between types of meat products within a product category and are likely to choose a different product category or consumption item.

The particular risk with exotic diseases that may enter Australia, is if the disease cannot be eradicated and becomes endemic. In this case, Australia would experience a long and painful period in which the industry would experience a large down-turn, until a time at which the government can reinstate area freedom and trade can recommence in international markets.

The largest threat to the industry from a disease outbreak is the immediate negative impact on exports to other states and countries. The single biggest risk for that Victorian producers (along with producers in other states and territories of Australia) is denied access to export

⁶⁹ Theodore Knight-Jones and Jonathan Rushton, "The economic impacts of foot and mouth disease – What are they, how big are they and where do they occur?", *Preventive Veterinary Medicine*, 112(3-4): 161–173, 1 November 2013.

⁷⁰ World Bank, <http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:20954941~pagePK:64257043~piPK:437376~theSitePK:4607,00.html>, accessed [12/1/2016].

⁷¹ FAO, *Impacts of Animal Disease Outbreaks on Livestock Markets*, 2006, p.1.

⁷² World Bank, <http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:20954941~pagePK:64257043~piPK:437376~theSitePK:4607,00.html>, accessed [12/1/2016].

markets which have very stringent quarantine requirements to prevent disease outbreaks, including blanket bans from exporting countries.

Table 5 in the previous section provides the value of each Victorian export product. A temporary embargo on one of the products would result in a multi-million dollar cost to the industry and would also impact the Victorian economy. For example, a temporary year-long embargo on Victorian exports of beef would result in a loss of \$A1.6 billion. This does not account for the negative impact on the entire Australian beef industry, with the potential of a blanket ban from key trading partners including the USA and Japan.

While each of Victoria’s key export markets (see Table 6) have their own specific disease monitoring and control regime, all will readily ban imports from Australia or other nations in the case of disease outbreaks. The existence of a disease in an area of Victoria would disqualify Victoria from exporting to the countries listed below, with significant economic consequences for the industry and the state (Table 13).

Table 13: Market access for major Victorian export destinations

Country	Market access conditions - Commentary
USA	Under the Animal Health Protection Act, the United States Department of Agriculture (USDA) monitors the animal health of other nations and guards against the entry of diseases into the US via agricultural import policies. This is aided by the Department of Homeland Security who collectively enforce such policies, such as via offshore pre-clearance programs. ⁷³ For example, the US only recently lifted a 14 year ban on beef imports from Argentina, after the discovery of foot-and-mouth disease in 2001. ⁷⁴
China	Exports to China must meet the provisions of the Chinese Food Safety Law, established in 2009. Criteria for safe food consumption are based upon international recommendations by world bodies such as Codex Alimentarius, the Food and Agriculture Organisation of the United Nations (FAO) and the World Trade Organisation (WTO). ⁷⁵ ‘Administrative Measures for Inspection and Quarantine of Inbound and Outbound Meat Products’, established in 2011 govern the specific procedures for meat importation into China. ⁷⁶ For example, in the case of meat exports, various documentation must be negotiated between the General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ) of China and corresponding safety departments in the exporting countries in order to establish veterinary and health requirements. Importantly, if AQSIQ is made aware of any infectious or contagious diseases, exports will be immediately stopped. ⁷⁷
Japan	The Ministry of Health, Labor and Welfare (MHLW) is responsible for food hygiene and standards. The Ministry of Agriculture, Forestry and Fisheries (MAFF) is responsible for animal disease control. Disease Control Law is based on the latest global information about the prevalence and existence of disease in certain areas. For example, areas that have infectious diseases, such as hoof-and-mouth disease, cattle plague and rinderpest are banned from importing into host products. ⁷⁸
Indonesia	The Indonesian Government (Ministry of Trade) requires an import permit for imported meat – with an accompanying health check certification. Indonesia has announced its intention to accept cattle and meat from countries with foot-and-mouth disease (FMD)-free zones, as is established in the 2014 Animal Husbandry and Animal Health Law ⁷⁹ . Indonesia recently announced the establishment of

⁷³ United States Department of Agriculture, *Agricultural Pests and Diseases*.

⁷⁴ CNN, ‘Argentina beef ban lifted’, 2015.

⁷⁵ EUSME Centre, *Exporting Meat Products to China*, p.2
http://www.ccilc.pt/sites/default/files/eu_sme_centre_guideline_exporting_meat_products_to_china.pdf

⁷⁶ Ibid.

⁷⁷ Ibid. p.4.

⁷⁸ *Legislative Council Secretariat*, Health Regulations for the Import of Food in Japan and the Export of Food in Australia, , p.5.

⁷⁹ James Nason, ‘Indonesia announces additional permit’, 11 August 2015.

	quarantine islands to allow imports from areas of Brazil and India, in order to diversify import sources away from a reliance on Australia ⁸⁰ . Currently Indonesia is only able to secure cattle and meat from countries which are entirely FMD free, as defined by the World Organisation for Animal Health (OIE) – namely Australia, New Zealand, Canada and the US. ⁸¹
South Korea	The government of South Korea has the power to ban imports from countries where the presence of contagious diseases has been detected, such as in the recent case where Canadian imports were banned in 2014 following the detection of bovine spongiform encephalopathy (BSE). ⁸²
Singapore	The Agri-Food and Veterinary Authority of Singapore is responsible for ensuring that imported food products are safe. This includes continuing to keep the country free from Foot and Mouth Disease (FMD), rabies, and other contagious diseases. ⁸³ This also includes the power to ban imports from countries with outbreaks of such diseases, such as occurred with the UK and the detection of BSE in 1996. ⁸⁴
Malaysia	The Malaysian government reserves the right to ban imports from countries where there are suspected outbreaks of contagious diseases. This happened in 2011, where there was a halt on imports of livestock from Australia due to an outbreak of Hendra virus in Queensland and in NSW ⁸⁵ .

Another longer lasting impact as a result of disease outbreak is the loss of reputation in international markets. For example, Australia’s area freedom status from the most contagious and fatal livestock diseases, such as foot and mouth disease and avian influenza H5N1 provides a competitive advantage with respect to other nations who do not have this status. One of the most severe cases of damage to reputation was the bovine spongiform encephalopathy (commonly known as mad cow disease) outbreak in the UK in 1996. The UK was able to regain access to the US markets in 2015, 19 years after the initial outbreak. While the exact cost of reputational damage and lost trust is difficult to quantify, qualitatively, it takes a long period to restore trade to the same level. Ireland was the first EU country to successfully negotiate re-entry into the US market following the outbreak. The UK and the Netherlands also recently regained access, however, it is currently difficult to determine when or whether trade volumes will reach pre-outbreak levels.

3.2.3 Impact on related industries

The profitability and performance of a range of industries is directly dependent, to varying degrees, on the livestock industry. This includes transportation, the operation of saleyards and other intermediary farms, meat processing facilities, wholesalers and retailers. An outbreak of a contagious disease causes a significant reduction in end-demand for the final product. As a result of the decreased demand, there are flow-on effect and impacts on stock and station agents, saleyards, abattoirs, knackeries and the associated transportation companies. Accordingly, a drop in export demand due to a ban on Victorian or Australian livestock to various countries would have a large negative impact on related industries, with particularly large impacts on regional economies.

⁸¹ Ibid.

⁸² Oscar Rousseau, ‘Canadian beef exports resume in South Korea’, 5 January 2016
<http://www.globalmeatnews.com/Livestock/Canadian-beef-exports-resume-in-South-Korea>.

⁸³ AVA, <http://www.ava.gov.sg/about-ava/what-we-do>, [accessed 11 Jan 2016].

⁸⁴ AVA, https://www.ava.gov.sg/files/avavision/Issue1_2014/food-bites-more-choices-of-safe-beef-imports-for-singapore.html, [accessed 11 Jan 2016].

⁸⁵ ABC, ‘Malaysia suspends Australian horse imports’, 21 July 2011.

3.2.4 Broader economy

Health impacts

Another significant consequence of a livestock disease outbreak, is the risk of the disease being transmitted to humans via contaminated food or through animal-human contact. Diseases which can be transmitted between humans and other animals are known as ‘zoonoses’, and include Anthrax, *brucellosis*, *leptospirosis*, *listeriosis*, *psittacosis*, *mycobacterium infections* (non-tuberculosis), tuberculosis and *Hendra*, *Nipah* and *Menangle* viruses.⁸⁶ These diseases can be highly infectious and have the potential to cause extreme harm to humans, including death.

In 2012, the Philippines experienced an outbreak of leptospirosis, as a result of extensive flooding. In this case, 171 people were affected, with five deaths directly attributed to the disease. Leptospirosis is a bacterial disease inducing fever, headache, pains, vomiting and diarrhoea, amongst other skin and haemorrhaging effects.⁸⁷ In 2009, another outbreak of leptospirosis, with 471 people infected and 51 dying as a direct result of the disease.⁸⁸

Australia, like other countries, has had outbreaks of deadly zoonoses. For example, there have been seven cases of the Hendra virus reported, with five fatalities, directly attributed to the disease. Recent cases of infections occurred during 2008 in Redlands where two people infected and in Carrawal where one person was infected.⁸⁹ Moreover, since 1994, 81 horses have died or been euthanized due to the virus.⁹⁰

Impact on consumers

Consumer surplus can also be affected by a livestock disease outbreak. In most cases there is a decrease in product quality and quantity and prices may increase due to reductions in supply. Importantly any adverse price impact is borne by consumers who do not wish to or are unable to substitute to other forms of protein or products.

3.3 Quantifying the costs of disease – case studies

Table 14 summarises the major outbreaks of diseases in Australia in recent history and their associated estimated cost.

Table 14: Significant outbreaks of livestock disease in Australia (\$ 2015)

Date	Disease	Location	Cost ⁹¹	Analysis
1999	Newcastle Disease	Mangrove Mountain, NSW	\$35m+ ⁹²	By May 1999, 1.9 million meat chickens and 13,000 laying hens had been slaughtered. It took 3 months and 5,000 people to control. The final costing figure only includes compensation and control costs.
1980 - now	Ovine Johne's	South east Australia	\$65.6m annual to	This figure was originally in 2004 dollars (prior to conversion) and was estimated by Hassall and Associated.

⁸⁶ Bronwyn Murdoch, Attwood, ‘Zoonoses-Animal diseases that may also affect humans’, January 2007.

⁸⁷ Jane Huston, ‘Leptospirosis Outbreak Follows Flooding in Philippines’, 4 January 2012.

⁸⁸ Al-Shere Amilasan et al. , ‘outbreak of leptospirosis after Flood, the Philippines, 2009’, *Centres for Disease Control and Prevention*, Vol. 18 No.1, January 2012.

⁸⁹ Queensland Ombudsman, *The Hendra Virus Report*, 2011, p.36.

⁹⁰ Australian Veterinary Association (AVA), Animal Hendra Virus Fact Sheet, p.1.

⁹¹ N.B cost will be expressed in A\$ 2015 (based on Australian CPI from September 2015 and comparison to the year of the study/review).

⁹² Productivity Commission, *Impact of a Foot and Mouth Disease Outbreak on Australia*, 2002, p.149.

	Disease (OJD)	sheep industry ⁹³		It specifically refers to the sheep industry. The losses were composed of market losses (85%) and productivity losses (15%). OJD's death rates varies from 2.1% to 17.5% per year, depending on which farm is sampled. ⁹⁴ There are no OJD free-zones in Australia. ⁹⁵
		Victoria	\$9.6 m/year ⁹⁶	Methodology used was a per head calculation, rather than aggregate figure.
1997	Anthrax	VIC and NSW	\$18.7 m	62 days duration and 84 properties affected. Over 78,600 cattle, and 2,600 sheep on 631 farms were vaccinated. One worker who interacted with a diseased animal was infected, yet recovered. ⁹⁷

While there have (to date) been no serious outbreaks in Victoria, should an event occur, it would be catastrophic for the livestock industry and the state economy more broadly.

For example, Table 15 summarises various academic studies which estimate the potential economic impact of a serious disease outbreak in a region of Australia.

Table 15: Estimated cost of hypothetical disease outbreak (inflated to 2015 \$)

Disease	Location	Cost	Analysis
Foot and Mouth Disease	VIC	793m (0.3% decrease in gross state product)	This is the Productivity Commission's modelled impact for a 12 month outbreak, using the Monash Multiregional Forecasting (MMRF) model. ⁹⁸
	Australia	\$17.3 billion (months) ⁹⁹	This is modelled under the assumption of a large 12 month outbreak. The estimated losses for a 3 month outbreak is \$7.7 bn.
	Victoria	\$6.5 billion (10 years) ¹⁰⁰	Assumes small outbreak in Victoria with extensive vaccination. Broken down into \$0.09bn of control costs and \$6.40 billion of revenue losses. Uses 7 per cent discount rate.
	Australia	\$20.1 billion (1 year) ¹⁰¹	One year outbreak, with 100 per cent of export markets closed in the first year. The loss from market access represented 90 per cent of total modelled losses. ¹⁰²
	Australia	\$52.2 billion (over 10 years) ¹⁰³	A large outbreak scenario where an FMD outbreak was to occur in Victoria and spread to the other eastern states of Australia. In this scenario, restrictions on exports could last for several years, with market share not fully recovering until 10 years later.

⁹³ Meat & Livestock Australia, Animal health and welfare, April 2006, p.56.

⁹⁴ Meat & Livestock Australia, The economic impact of OJD infection on sheep farms, 2013, p.1.

⁹⁵ Meat & Livestock Australia, <http://www.mla.com.au/Research-and-development/Animal-health-welfare-biosecurity/Diseases/Infectious/Johnes-disease>, [accessed 13 January 2016].

⁹⁶ DEDJTR, *Review of Animal Health*, May 2005.

⁹⁷ Productivity Commission, *Impact of a Foot and Mouth Disease Outbreak on Australia*, 2002, p.152.

⁹⁸ Ibid. p.86.

⁹⁹ Ken Matthews, *A Review of Australia's preparedness for the threat of foot-and-mouth disease*, 2011, P.3.

¹⁰⁰ ABARES, *Potential socio-economic impacts of an outbreak of foot and mouth disease in Australia*, 2013, p. ix.

¹⁰¹ Centre for International Economics, *NLIS (sheep and goats) business plan: the costs of full compliance with NLTPS*, 2010.

¹⁰² ABARES, *Potential socio-economic impacts of an outbreak of foot and mouth disease in Australia*, 2013.

¹⁰³ ABARES, *Potential socio-economic impacts of an outbreak of foot and mouth disease in Australia*, 2013, p.25

Bovine tuberculosis and brucellosis^e	Australia	\$19.6 billion loss to livestock producers. A net loss of \$8.05 billion (including consumers) (In 1987 dollars). ¹⁰⁴	Assumption of both whole country exclusion and zone exclusion.
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The primary way to estimate the consequences for Victoria of a major disease outbreak is to consider the impact of incidents in other countries. Table 16 summarises the economic cost of various international disease outbreaks.

Table 16: Major outbreaks of livestock disease – international examples (currency as detailed by year)

Year	Disease	Location	Approximate cost	Analysis
2001	FMD	UK	£4.1bn ¹⁰⁵	The UK Treasury found a 0.2 per cent decrease in GDP was attributable to the FMD outbreak. This is because many of the agents involved (consumers and firms) redirected their expenditure to other areas. More than 4 million animals were slaughtered as a result of the outbreak. It was not until January 2002, 11 months following the initial detection, that the UK was once again declared FMD free. ¹⁰⁶
1996	<i>Bovine Spongiform Encephalopathy</i> (BSE, Mad Cow Disease)	UK	£743 – 980 m ¹⁰⁷ (AUD 1,653-2,180) (1997 dollars)	This represents 0.1 per cent to 0.2 per cent of GDP in 1996/97. The economic loss was reduced via increased substitution of meat-product consumption.
2003	BSE	US	US\$3 - \$4bn ¹⁰⁸	This figure focusses on the cost in the first quarter of 2004 only.
2003-5	BSE	US	US \$600m ¹⁰⁹	Only accounting for lost export revenue.
2003	BSE	US	US\$ 11bn	This figure is purely from export restrictions. ¹¹⁰
2010	FMD	Japan	US\$550 m	Direct costs only, total costs if considered will be greater than this amount. This outbreak lasted for 4 months. Approximately 290,000 animals were slaughtered. ¹¹¹
2010-11	FMD	South Korea	US \$2780m +	This epidemic lasted for 5 months and resulted in the slaughtering of approximately 3,470,000 cattle. ¹¹²

Frequency of a livestock disease outbreak

Studies here, and overseas, indicate that the costs of a disease outbreak, when they occur, can be substantial and run into the millions of dollars. However, assessing the significance and

¹⁰⁴ Gary Stoneham and J. Johnston, (1987), *The Brucellosis and Tuberculosis Eradication Campaign - An economic evaluation of options for finalising the campaign in Northern Australia*, ABARE Occasional Paper 97, AGPS, Canberra.

¹⁰⁵ National Audit Office, 'The 2001 Outbreak of Foot and Mouth Disease', 21 June 2002, p.1.

¹⁰⁶ Productivity Commission, *Impact of a Foot and Mouth Disease Outbreak on Australia*, 2002, p.149.

¹⁰⁷ Nigel Atkinson, 'The Impact of BSE on the UK Economy', 1997.

¹⁰⁸ Jason Henderson, *FAQs about Mad Cow Disease and Its Impacts*, 2004, p.3.

¹⁰⁹ ABARE, *Meat outlook to 2010-11*, 2006.

¹¹⁰ FAO, *The State of Food and Agriculture 2009*, 2009, p.4.

¹¹¹ Oxford Analytica, *The Costs of Animal Disease*, October 2012, p.24.

¹¹² *Ibid.*

magnitude of the costs and risk in Victoria also depends on the likelihood that such events will occur here.

While the number of disease outbreaks in Victoria over the past decade have been limited, there were a number of stakeholders that expressed views during the consultation process that the system currently was not adequate to ensure that, in the event of disease outbreak, the disease could be traced back to its origin in a timely and accurate manner.

While these participants were generally satisfied with the traceability arrangements and capability of the existing system for cattle, this was not the case for sheep, goats and pigs.

Owing to the current mob-based approach for sheep, goats and pigs, some participants had the view that current traceability capability lacked timeliness and accuracy, and therefore would not be able to adequately trace back the source of a disease outbreak in a timely and accurate manner.

Due to the potentially catastrophic nature of some livestock disease outbreaks (should they occur), DEDJTR considers it prudent to adopt a precautionary-type approach.

3.4 Rationale for government intervention

The rationale for government intervention in the management of livestock diseases is to manage and mitigate the consequences of significant negative externalities (costs absorbed by a third-party) and potential information failure. In principle, government intervention, provided the benefits of doing so exceed the costs, represents an increase in overall economic efficiency for society.

The important negative externalities which exist in the livestock industry with respect to disease include:

- impact on trade including market access
- impact on Australia and Victoria's reputation
- community safety including public health and food quality
- environmental impacts including impact on biodiversity.

Government intervention is needed to align individual agent incentives with that of the broader society. In the absence of regulation, individual agents in this market do not bear all the benefits of their potential decision to combat diseases, while they do incur most of the costs. For example, producers may not derive personal benefit from disease control investments that minimises the risk to consumer health. This is particularly true if they are one of the thousands of suppliers for a large retailer. Thus, there is no incentive for any one agent to spend more on disease reduction than would benefit them personally. This also assumes that all agents equally believe that they are likely to be affected by any disease outbreak, which is not necessarily the case. Some producers or intermediate agents would likely not make any investment in disease reduction due to disease's 'invisibility', as this may place them at a cost disadvantage.

Thus, in the absence of government intervention, economic outcomes are inefficient, and hence there is a market failure. Government has a role because additional expenditure can be made to more than proportionately reduce the costs worn by other parties. Thus in the aggregate, individual agents are not willing to make sufficient investment in disease reduction to a level that is socially efficient (in terms of total benefits and total costs for all stakeholders), whereas government can. This principle can be similarly applied to all of the externalities listed above.

Government is also well-placed to be able deliver the socially-efficient outcomes for disease prevention. A government-coordinated approach allows for economies of scale which reduces the cost burden on individual stakeholders. This means that disease reduction can occur to a relatively large extent (even complete eradication) under government intervention, as each dollar spent achieves more reduction in disease risk. Furthermore, there is a long and successful historical precedence of government being well-equipped to deal with matters of national and state-wide reputation, public health, food quality, community safety and environmental care. This means government is best placed to deliver protections efficiently.

The second area in which there is a market failure, is the degree of information efficiency in the market. Informational integrity and efficiency is critical to the efficient operation of any market, as supply and demand decisions do not have to account to the same extent for poor quality and the incentives of agents can be better aligned. This tends to increase the quantity traded in the market. This can be clearly illustrated through the example of a producer or intermediate agent who detects an animal has a contagious disease. If the market is large and there are many producers which afford agents a relative degree of anonymity, there is potential for this actor to have the perverse incentive to on-sell diseased animals. Agents in this market can become aware of this risk and thus factor it into their demand and supply decisions which have the overall impact of reducing quantity traded in the market.

Government intervention can correct the informational problem through an accurate animal tracking system to increase traceability. This would mean that individual agents internalise the costs of their decisions in the case of misdemeanours (as the source of the animals can be traced). Additionally, market participants can have more confidence than otherwise that the animals which they are trading are not diseased or that if they are diseased, the source of the diseased animals can be traced.

4 Objectives

The objectives are important as they help to assess whether the proposed Regulations have been appropriately selected as a means of addressing the underlying problems. In addition, a main criterion for assessing the proposed Regulations against their alternative options is their relative cost-effectiveness in achieving this objective.

DEDJTR has a number of overarching objectives for the management of biosecurity, including threats to biosecurity posed by livestock disease. DEDJTR aims to:

- Minimise the impact of pest, disease, invasive plants and animals, chemical use and residues, and animal welfare incidents upon market access, and the environment and production systems, while ensuring food safety and public health.
- Maximise the adoption of best practice in animal welfare, chemical use and residues, and biosecurity (control of pests and diseases and invasive plants and animals either naturally occurring or deliberately introduced).

To achieve this, the Regulations:

- provide for the timing and manner of the notification of livestock diseases
- provide for the manner in which certain livestock are identified
- provide for the manner of certification of, and restrictions relating to, livestock, livestock products, fodder or fittings introduced into Victoria
- set out the standards and record keeping requirements relating to the testing for livestock diseases
- set out requirements for the prevention of livestock diseases
- provide for the recording or forwarding of information relating to the movement of identified livestock
- provide for matters relating to claims for compensation for losses incurred due to livestock disease, and
- provide for other matters authorised by the Act.

5 Options

This RIS assesses four options to prevent, monitor and control livestock disease in Victoria, relative to the no regulation base case.

5.1 The base case

As this is assessing Regulations that are sunseting, all options must be compared to the situation where no regulation exists.

A no regulation base case would hypothetically allow primary producers, agents, saleyards and abattoirs to cease tagging animals and passing on information if they wish to do so. Conceivably, the Government could continue to subsidise the equipment and hope that this would encourage market participants to continue using the system. However, producers have little private incentive to make investments in the absence of regulations. The costs of implementation would also outweigh any private benefits. Universal traceability generates substantial positive externalities (and avoids negative externalities).

In addition, those producers who may choose to voluntarily adopt traceability mechanisms would likely be lower risk, meaning that overall risk would not be significantly reduced. A reduction in traceability would also likely mean the loss, in the future, of several export markets as Victorian meat would no longer be acceptable to several nations without a comprehensive traceability scheme.

Substantial sunk costs have been incurred by market participants to comply with the requirements of the Regulations to date. The no regulation base case would likely lead to a reduction in the return to these investments, as producers and other market participants would not receive the full benefits of this equipment (e.g. saleyards would be unable to trace where livestock have come from). For those market participants who have already made their investments, the benefits of the Regulations are available to them at a lower cost.

While not impossible, this option would mean abandoning all of the sunk costs already incurred in the operations of the Regulations to date. This would include all of the tags and scanning equipment invested in by various sections of the supply chain for sheep and goats. As tags are specific to certain properties, these are not able to be resold and hence the cost is considered a sunk cost. It would also mean foregoing all of the benefits of the proposed Regulations.

5.2 Options

The options in this RIS have been developed with regard to DEDJTR analysis, consultation with stakeholders, evidence from academic sources and overseas, and the experience with the Regulations to date. The view of most industry stakeholders is that the Regulations are largely working well, apart from concerns about the traceability of sheep and goats. Therefore, common to all options is maintaining the current (as at July 2016) regulatory requirements for cattle, the apiary industry and aquaculture. In addition, Options 2 to 4 propose rolling most of the current voluntary pig industry standards into the Regulations to make them compulsory. In summary, the options considered in this RIS involve:

- maintaining the current EID requirements for cattle following feedback from industry that the current system is working well, and that it appeared from testing that it was able to provide accurate and timely trace back information. Throughout the consultation, all stakeholders were in favour of maintaining this requirement due to the benefits (in particular, increased export value) brought about by improved traceability in comparison to the visual based system that had previously been in place in Victoria. During a number

of trials and suspected FMD incidents, the EID systems were able to quickly and effectively respond¹¹³

- maintaining requirements in relation to cattle identification, disease notification, testing of animals, and regulations affecting apiaries and other non-farm animals.

The options in this RIS differ in terms of the requirements for sheep, goats and pigs as follows:

- **Option 1:** Re-make the Regulations (as at 1 July 2016¹¹⁴), requiring visual identification of sheep and goats, whilst maintaining current requirements for the identification and tracing of pigs (see Section 1 for further details).
- **Option 2:** Re-make the Regulations (as at 1 July 2016), and introduce enhanced visual and mob-based identification for sheep and goats. This Option also involves incorporating most of the key requirements (relating to identification and uploading of information) in the NLIS Pig Traceability Standards into the Regulations (see Appendix C).
 - This option is one familiar to industry participants as it has been under consideration for a number of years, and described in the NLIS ABARES RIS.¹¹⁵
- **Option 3:** Re-make the Regulations (as at 1 July 2016), however, require mandatory EID for all sheep and goats born on or after 1 January 2017, followed by phased-in mandatory EID for sheep and goats born prior to this date (EID by 2022), and those sheep and goats born on or after 1 January 2017 that are introduced from interstate to a Victorian property, must be EID tagged before they leave that Victorian property on or after 1 January 2019. This Option also involves incorporating most of the key requirements (relating to identification and uploading of information) in the NLIS Pig Traceability Standards into the Regulations as per Option 2.
 - This option reflects the Ministerial decision on 24 August 2016 to implement sheep and goat electronic tagging requirements in Victoria.
- **Option 4:** Re-make the Regulations (as at 1 July 2016) in the same way as Option 3, except that sheep and goats born before 1 January 2017 will be permanently exempted from the EID tagging requirement. This Option also involves incorporating most of the key requirements (relating to identification and uploading of information) in the NLIS Pig Traceability Standards into the Regulations as per Option 2.

5.2.1 Option 1 – Remake existing Regulations

For a description of the Regulations, please see Section 1.3 (Current Regulatory Requirements).

¹¹³ Victorian Auditor General, Biosecurity Livestock, 2015

¹¹⁴ The analysis of this option will not include any costs incurred by regulated entities as a consequence of the proposed regulatory amendment to required EID (EID) tagging from 1 January 2017 as these are considered to be a sunk cost that industry will have already incurred prior to any new regulations taking effect.

¹¹⁵ Department of Agriculture, ABARES, Implementation of improvements to the National Livestock Identification System for sheep and goats - Decision Regulation Impact Statement, September 2014.

5.2.2 Option 2 – Re-make the Regulations (as at 1 July 2016), and introduce enhanced visual and mob-based identification for sheep and goats (and incorporating the NLIS Pig Traceability Standards into the Regulations)

Option 2 introduces enhancements to the mob-based NLIS system that aim to improve traceability of sheep and goats throughout the supply chain. To maximise traceability, several changes to the identification and tracing requirements for sheep and goats are proposed:¹¹⁶

Improving traceability

- Use of visual transaction tags as a method for identifying non–vendor bred sheep and goats will no longer be permitted.
- Mob-based movement recording for property-to-property movements needs to be mandatory with completion required within two days of arrival.
- For sheep and goats traded—through saleyards, or sent directly to an abattoir for processing, or arriving at a depot in preparation for live export, or received by a producer directly from another producer—the person receiving the sheep and goats must within two days upload to the NLIS database a PDF of the verified, accompanying National Vendor Declaration (NVD).

Verification in saleyards and abattoirs

- Agents must undertake sampling prior to sales to ensure that all and only the PICs of mobs are on NVDs, including to:
 - draft off a sample of sheep prior to sale by:
 - physically manhandling sample sheep to read tags
 - recording the PICs of the tags that are read and reconcile the list of read tags with those listed on the NVDs
 - replacing missing tags
 - in the event samples do not accord with the NVD, drafting off another sample and repeating the process
 - draft off a sample following the sale to ensure that all and only the PICs of mobs are on the NVD.
- Abattoirs must verify tag against NVD for every animal prior to slaughter (using manual or photographic methods).
 - If tags are missing, this must be followed up.
- Where more than 2 per cent of the consignment to an abattoir is untagged, alert DEDJTR.
- Only process livestock where the last PIC is known and NVD is complete and correct.

Auditing

- Random auditing by DEDJTR or third party to ensure the integrity of the saleyard sampling process.
- Inspection of NVDs in saleyards by DEDJTR or third party.

¹¹⁶ These requirements are taken from the National Livestock Identification System Decision Regulatory Impact Statement, prepared by ABARES in 2014, and are a combination of the significant requirements assumed in the report (P70 – 71), and the business rule changes and verification procedures proposed by Victoria at the time (P71 – 74).

- Random auditing of processors by DEDJTR or third party to ensure the recording of all carcasses on NVDs and the database, and to ensure consistency with the kill sheet and with PICs on tags.
- Training of auditors and inspectors.

Pig traceability requirements

Under this option, most of the key NLIS Pig Traceability Standards (see Appendix C for full standards and highlighted sections to be incorporated into the Regulations) would be incorporated into the remade regulations. This would make them compulsory for participants in the industry. Most significantly, they cover requirements in relation to property identification, pig identification and uploading of pig movement information. The standards being incorporated require similar levels of traceability to that required in the Regulations for sheep and goats, including:

- uploading of movement information to the PigPass database
- accurate completion of NVDs and ensuring they are delivered to the recipient
- regular reconciliation of pigs and PICs
- uploading of kill files
- requiring pigs to be identified in a certain manner before transportation or slaughter.

This change to the Regulations is not expected to have a significant impact, as most producers, transporters and processors currently comply with the industry standards. Incorporating some of the standards into the Regulations under Options 2 to 4 is intended to give DEDJTR greater powers to engage with those industry participants (generally smaller producers or hobby farmers) who are currently not complying.

5.2.3 Option 3 – Remake the existing Regulations but require EID for sheep and goats as part of a phased-in approach (and incorporating the NLIS Pig Traceability Standards into the Regulations)

Option 3 is to re-make the Regulations, with the following changes:

- Mandatory EID tagging for all sheep and goats born on or after 1 January 2017 (on commencement of regulations).
- Mandatory EID tagging for all sheep and goats born on or after 1 January 2017 and introduced to a Victorian property from interstate from 1 January 2019 before they are dispatched from that Victorian property (except for those being transported directly to an abattoir)
- Mandatory EID tagging of sheep and goats born before 1 January 2017 from 1 January 2022.
- Incorporating the NLIS Pig Traceability Standards into the Regulations.

Note that some regulated parties will have already made investments to prepare for EID tagging of sheep and goats in anticipation of the proposed regulations. The analysis in this RIS includes these costs, even though these may have already been incurred prior to the Regulations taking effect.

Pig traceability requirements

Under this option, most of the NLIS Pig Traceability Standards will be incorporated into the remade regulations as in Option 2.

5.2.4 Option 4 – Remake existing Regulations, requiring EID for sheep and goats, and exempt sheep and goats born before 1 January 2017 from being electronically tagged (and incorporating the NLIS Pig Traceability Standards into the Regulations)

Option 4 is equivalent to Option 3 except that sheep and goats born prior to 1 January 2017 will not be required to ever be identified using electronic NLIS devices. As in Option 3, interstate sheep and goats will require EID from 2019.

This means that these animals will only need to be visually tagged during their lifetime, and that universal coverage of electronic tagging of all sheep and goats will not eventuate until all animals born before 1 January 2017 have died (the life expectancy of sheep is 10-12 years). These animals are typically not transferred as often between properties and are thought to pose a much lower risk.¹¹⁷

Pig traceability requirements

Under this option, most of the NLIS Pig Traceability Standards will be incorporated into the remade regulations as in Option 2.

5.3 Alternatives not considered in this RIS

Micro-chipping - where microchips are implanted under the skin of the animal, however these are not removable and could contaminate meat. As such, micro-chipping has not been considered further in this RIS.

Conduct trials on the new EID requirements before deciding on their implementation – Undertaking trials was considered prior to the implementation of the 2006 Regulations, this was for the purposes of trialling the technology. Given the EID technology has now been successfully trialled in cattle (and voluntarily in sheep and goats) in Victoria and has already been implemented in the European Union, a further trial is no longer needed.

Mandatory visual transaction tagging – Mandatory transaction tagging would involve linking visual NLIS (Sheep) breeder tags on the PIC of birth and post-breeder tags on each subsequent PIC of residence. Visual transaction tagging is likely to compromise trace forward (tracing the cohort of an animal from its property of birth to its current location), with adverse consequences for overall traceability. Therefore this option was not considered in any further detail. In 2010, when this option was considered in more detail, it was considered by the then Department of Primary Industries, that the best outcome in relation to the traceability of sheep and goats under this option is 75 per cent.¹¹⁸ As such, visual transaction tagging is not considered further in this RIS.

Mandatory digital camera technology in abattoirs to read visual tags – This practice has been adopted voluntarily by abattoirs to reduce the labour intensity of the visual based system, however take-up has been limited, perhaps due to the poor readability of visual tags in the medium-term, and that cameras may not always pick up the tags accurately. Furthermore, this practice does not improve traceability in saleyards or on properties. As such, leaving this as a voluntary option allows businesses to make this investment if it is beneficial to them, however, it is not considered further in this RIS.

¹¹⁷ Agriculture Victoria, 'Foot-and-mouth disease', <http://www.agriculture.gov.au/pests-diseases-weeds/animal/fmd>, accessed 1 December 2016.

¹¹⁸ PwC, 2010, Options assessment for the identification of sheep and goats, p14.

Removing saleyards from the supply chain – This option would only allow movements from PIC of birth to abattoirs (as is the case in New Zealand for most lambs destined for EU markets). This may at least temporarily address some concern about mixing of livestock (and thus decreasing the risk and complexity of traceability) but it will not address broader traceability issues with the system and would have detrimental impacts on the supply chain. This option is not considered practical in the Australian context given the integral role currently performed by saleyards. As such it has not been assessed further in this RIS.

Electronic tagging only for sheep and goats that are traded through saleyards – Providing an exemption from electronic tagging requirements for sheep and goats sent directly to abattoirs would reduce costs. However, such a system would struggle to meet the National Traceability Performance Standards. While the movement of sheep and goats through saleyards is high risk for the spread of infectious disease (should an outbreak occur), an efficient traceability system is needed that covers the entire supply chain, not only half the movements through saleyards. Livestock can catch diseases through airborne transmission from one farm to another, not just through saleyards. In addition, an exemption would limit the potential benefits (eg productivity gains) of the large capital outlays, particularly by producers, as sheep and goats could not be tracked from paddock to abattoir. Similarly, there would not be full traceability across the supply chain, which would increase the risk of disease spread in the event of an outbreak and this has not been considered further in this RIS.

6 Analysis of options

This chapter looks at the costs and benefits of the options discussed in the previous chapter.

The costs and benefits of each option are calculated in comparison to the no regulation base case.

The focus of the RIS is on the higher impact requirements around sheep, goats and pigs, rather than more minor requirements around bees and other livestock.

6.1 Benefits of the options

The primary intention of all options is to improve traceability, enabling disease to be detected, monitored and controlled more effectively, thus avoiding and limiting the impact of the economic and social harms of a severe outbreak. Notably, the requirements of each option cannot prevent a disease outbreak, but can control or limit the incidence and spread of disease, ie stop an outbreak becoming a severe incident. There are also other benefits, for example improved animal welfare, unique to each of the Options.

6.1.1 Benefits of traceability

The ability to trace back diseased livestock to determine the source of the disease and the other potentially impacted livestock in an accurate and timely manner is most important in the instance of an outbreak. While traceability will not prevent an outbreak from occurring, it has the potential to significantly reduce the duration, size and costs of an outbreak.

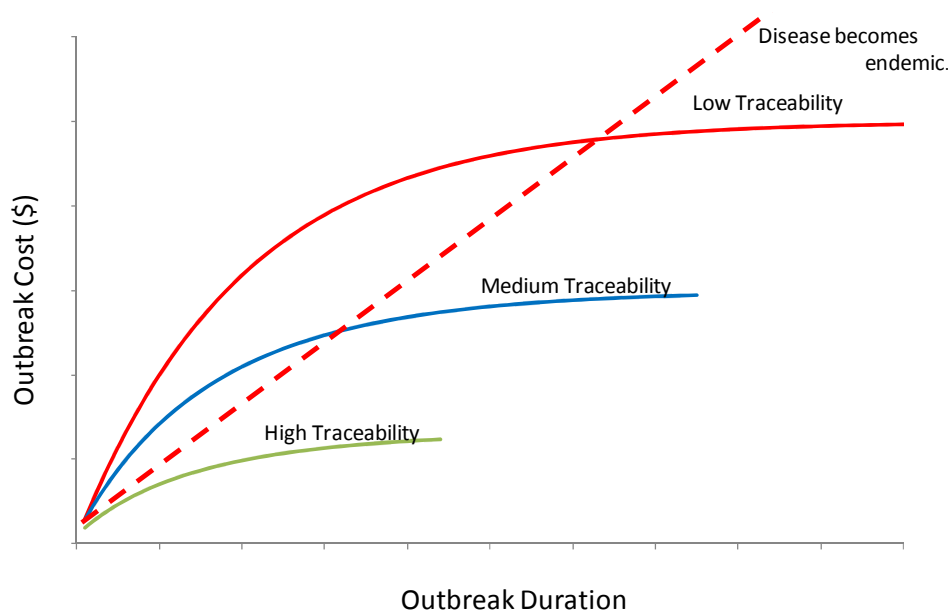
The importance of this tracking was demonstrated during the 2001 FMD outbreak in the UK. In the first two weeks of the 2001 epidemic, it became apparent to investigating veterinarians that much of the early dissemination of disease, prior to the diagnosis of the index case and the imposition of the national livestock movement ban, had been due to the movement of infected but otherwise symptomless sheep, particularly through the Hexham and Longtown markets. Dealers who were purchasing and quickly on-selling sheep were partly to blame. The involvement of markets led to fears that the infection had been introduced into many more sheep flocks than could be traced, even following the massive mobilisation of human resources, within a short period of time. It became necessary to systematically slaughter approximately 6.5 million animals because sheep of interest could not be traced, and also on welfare grounds because the value of the animals had collapsed.

The first step in a disease outbreak is for the jurisdictions to determine the 'epidemiological unit or units' where the animal of interest has been a member in the relevant 30 day period. The current NLIS (for sheep and goats) is 'mob based', however sheep don't stay in static mobs. From the day a sheep is born, animals will periodically be introduced onto, and leave the animal's PIC of birth, and subsequent PICs. Each of these movements creates a new mob or 'epidemiological unit'. Saleyard movements, which are a feature of our supply chain, add considerably to the cohorts that needs to be traced.

Trace back is also important in relation to tracing back chemical residues or animal welfare issues. Chemical contamination is a more frequent problem in the livestock industry than disease outbreaks. Chemical contaminations occur for a variety of reasons including, but not limited to, pesticides and herbicides, soil contamination, water contamination and food contamination. The quality of meat product from a contaminated animal is lower than a non-contaminated animal. Overseas markets including Japan and the EU do not accept livestock products that have been contaminated with chemicals.

Figure 3 shows the relationship between that ability to trace back, with the likely duration of the outbreak and the relevant total cost (to the industry and the economy).

Figure 3: Relationship between traceability, outbreak duration and cost impact



The degree of traceability can be further broken down into timeliness and accuracy. Traceability is deemed to improve as the time required to undertake the trace-back decreases, however timeliness alone does not lead to high traceability without accurate information. For instance, only a system that identifies individual livestock with low instances of error can achieve a high level of traceability.

Option 1 – Remake the existing Regulations

Remaking the existing Regulations will enable the current degree of traceability to continue, however the current mob-based system for sheep and goats is considered to only provide a low/medium level of traceability. This is due to the time required to trace-back (which can vary from days to weeks depending on factors such as the number of livestock affected) and the questionable accuracy of data (eg. taken for manually written sheets that are sometime incorrect, incomplete or illegible).

This option provides better traceability than the no regulation base case where there is unlikely to be comprehensive tagging carried out, however it leaves considerable room for improvement.

This option will not change the requirements for tracing of cattle or pigs.

Option 2 – Remake existing Regulations but require enhanced visual and mob-based system for sheep and goats (and incorporate the NLIS Pig Traceability Standards in the proposed Regulations)

Introducing additional requirements for the mob-based system of tracing sheep and goats is likely to increase the accuracy of trace-back primarily by requiring sampling to occur that would verify the information provided in the NVD, however it will not improve the timeliness of the process as it still relies on individual inspection of manual hard copy versions of NVDs.

This option would see no change to the requirements for tagging of cattle, however most of the requirements in the NLIS Pig Traceability Standards would be incorporated into the Regulations. While most of the larger producers already adhere to the requirements in the NLIS Pig Traceability Standards, it is hoped by putting the requirements in regulation, and thus making them compulsory for all industry producers that adherence to the requirements would increase. It is noted that DEDJTR currently has limited data on the location of smaller industry producers and therefore monitoring compliance would remain challenging.

Option 3 – Remake existing Regulations but require EID for sheep and goats as part of a phased-in approach (and incorporate the NLIS Pig Traceability Standards in the proposed Regulations)

The introduction of a requirement for EID for sheep and goats in Victoria would likely improve the accuracy and timeliness of trace-back due to the technology that can be utilised in such a system. The system enables DEDJTR to quickly and easily access the latest records online, and ensure that all information is accurately recorded (as it is automatically recorded rather than manually transcribed). After 2022, it would cover all sheep and goats, which would allow for extremely good traceability for the Regulations, performing much better than Option 2. It would considerably improve DEDJTR's capability to respond to, and manage a potential outbreak.

Benefits in relation to cattle and pigs would be the same as for Option 2.

Option 4 – Remake existing Regulations but require EID for sheep and goats with an exemption for those sheep and goats born before 1 January 2017 (and incorporate the NLIS Pig Traceability Standards in the proposed Regulations)

This option is expected to yield much the same benefits in terms of improvements in the accuracy and timeliness of traceability as Option 3 in the longer term, however the benefits in the initial years are likely to be slightly reduced due to a proportion of sheep born prior to 1 January 2017 remaining on the visual mob-based system until those animals reach abattoirs or otherwise die. After all sheep and goats born prior to 2017 have died, it is expected that the benefits are likely to be the same, as these sheep and goats would no longer be part of the system.

Benefits in relation to cattle and pigs would be the same as for Option 2.

6.1.2 Approach to comparing the benefits of traceability under each option

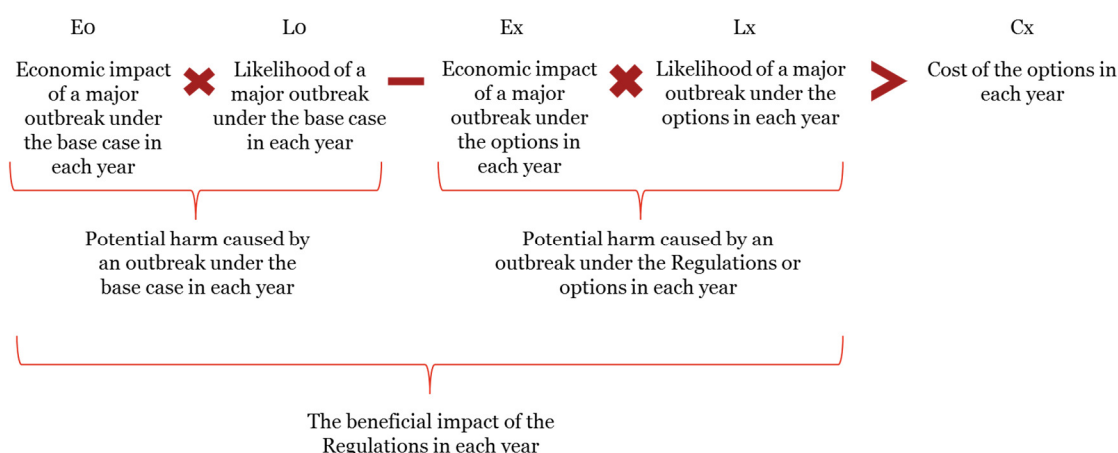
Quantifying the benefits of traceability is more difficult than providing a qualitative understanding. Both the likelihood of an incident (disease, chemical residue or animal welfare issue) and the economic impact can vary based on a great number of factors.

One of the key benefits of a system that allows for good traceability is that it allows for timely and accurate trace back in the event of a disease outbreak, chemical residue issue or identification of an animal welfare incident. Good traceability is therefore expected to contain a potentially major incident (represented by the 'red' low traceability line in Figure 3) to a relatively more minor incident (represented by the 'green' high traceability line in Figure 3). While high traceability does not avoid an incident as such, it is expected to avoid the severity of an incident (ie stopping it becoming a major incident) by containing it as a relatively more minor incident due to timely and accurate data that can enable faster, and more accurate, implementation of measures (such as treatment, quarantine or slaughter) to better monitor, contain and eradicate a disease outbreak.

Therefore to compare the relative benefits of each option, we have chosen to consider the level of reduction in severity at which the cost of each option would 'break-even' against the avoided harm caused by the requirements. That is, comparing the reduction in the impact of a major disease outbreak (by containing it to a relatively more minor outbreak) to the cost of the traceability system.

This can be expressed in Figure 4:

Figure 4: Break-even approach to benchmarking regulatory options



Source: PwC analysis.

Using our estimates of the cost of the options (Cx), ABARES's estimate of the cost of a major FMD outbreak (Eo),¹¹⁹ and DEDJTR's¹²⁰ estimate of the likelihood of a major outbreak in each year (Lo and Lx), one can solve for the required reduction in the severity of a major outbreak under the options in each year (Ex).

The advantage of a break-even approach is that even if the absolute value benefits of an option are uncertain, its impact can still be assessed and compared with other options. Unlike a traditional cost-benefit approach, the result of a break-even analysis does not by itself justify the adoption or rejection of a proposed option. Instead, a judgement is required as to whether the break-even point is reasonable and how it compares to the plausibility of the break-even points of other options (see Section 7.1).

Why use the impact of a major disease outbreak?

A major disease outbreak such as the FMD outbreak experienced in the UK in 2001 is what the options are intended to avoid. The objective of the Regulations is to detect and trace outbreaks as quickly as possible so as to manage these risks, rather than to prevent diseases. Given the range of possible diseases and their characteristics, this is considered a more proportionate and effective technique than universal vaccination.

The worst case scenario is an appropriate variable because reducing the risk of a worst case disease outbreak will also reduce the risk of a range of less severe outbreak scenarios occurring. The use of the break-even analysis suggests that if the severity of any of these outbreaks was lessened through the investment undertaken due to the regulations, the cost of the regulations would be justified. Using the avoidance of a FMD outbreak as an illustration of the benefits is also conservative, because the Regulations also aim to minimise the impacts of other livestock diseases.

Economic impact of a major livestock disease outbreak on Victoria

As detailed in Table 15, there are a number of estimates of the economic impact of a hypothetical livestock disease outbreak in Australia. The most recent comprehensive estimate, by the Australian Bureau of Agricultural and Resource Economics (ABARES) in 2013, projected that a major large scale outbreak of Foot and Mouth Disease (FMD) in Australia would cost the national economy a total of \$52.2 billion, spread over 10 years. Their hypothetical outbreak scenario originated in Victoria, which due to the higher density

¹¹⁹ ABARES, *Potential socio-economic impacts of an outbreak of foot and mouth disease in Australia*, 2013, p.25

¹²⁰ As informed by ABARES's estimate.

of livestock and prevalence of intensive farming, would be the most likely source of an outbreak.¹²¹ Nonetheless, the total figure of \$52.2 billion is for the nation as a whole, and certain assumptions are needed to come to an estimate of the impact on Victoria:

- The share of the economic impact is proportional to Victoria's share of agricultural revenue from livestock, ie 30 per cent.¹²² In reality, the real share of economic impact could be higher or lower than this:
 - The economic impact could be higher due to Victoria's high export revenue, meaning that any international trade bans would heavily impact the state.
 - It may be lower if the Victorian Government has a higher preparedness for disease than other states.
- Victoria does not experience higher claims for compensation or higher economic impact if it was to be the source of the outbreak.
- Although the cost of the hypothetical outbreak is spread over 10 years, the cost of the outbreak can be aggregated and expressed as a total cost per incident.

Under these assumptions, we have assumed that the economic cost to Victoria of a major FMD disease outbreak would come to **\$15.7 billion**.¹²³

Likelihood of a major disease outbreak in Victoria

Estimating the likelihood of a major FMD outbreak in Victoria is a hypothetical calculation given the rarity of such outbreaks in Australia. In their 2013 NLIS Decision RIS (DRIS), ABARES used an assumed probability of an FMD incursion per year of 1.5 per cent.¹²⁴ This was taken from the Centre for International Economics' 2010 report, which stated that an FMD outbreak is likely to occur once or twice in a 100 year period.¹²⁵ A probability of 1.5 per cent implies that an outbreak is likely to occur **once in every 67 years**.

Cost of a major outbreak in Victoria using an expected value approach

The expected value cost of a major outbreak in Victoria combines the total economic impact with the likelihood of the outbreak. This implies:

- \$15.7 billion in impact once every 67 years.
- An expected value of \$234 million every year (\$15.7 billion divided by 67), or **\$2.34 billion every 10 years**.

6.2 Non-quantified benefits

The estimate of the extent of harm that might be avoided through improved traceability discussed above does not include other potential benefits of improved traceability which cannot be quantified, but which are relevant for some options.

6.2.1 Benefits of EID

Animal productivity benefits

¹²¹ ABARES, *Potential socio-economic impacts of an outbreak of foot and mouth disease in Australia*, 2013, p.25

¹²² ABS, *Value of Agricultural Commodities Produced, 2014-15*, 7503.0.

¹²³ ABARES also calculated that a 'small outbreak in Victoria' would cause a total direct of \$6bn, which could imply that \$15.7bn is conservative.

¹²⁴ ABARES, NLIS Decision RIS, September 2014, p29.

¹²⁵ Centre for International Economics, NLIS (sheep and goats) Business Plan: The costs of full compliance with NLTPS, June 2010.

Significant opportunity to improve productivity through EID tag analysis has been identified by PwC (in 2010),¹²⁶ CIE (in 2010)¹²⁷ and ABARES (in 2013 and 2014).¹²⁸ Early detection of weight loss can achieve greater efficiency in nutritional supplements and improved identification of superior and inferior producers. This can lead to future improved genetic sourcing and targeting which would improve yields. Furthermore there are benefits to the early tracking of reproduction and time saving benefits associated with easier data collection. There is some possibility that increased wool yields could be achieved for wool producers using EID tags. All of these benefits depend on economies of scale. Therefore, it is likely that the majority of benefits will be experienced by medium and large producers.

It is expected that Meat and Livestock Australia (MLA) will invest in the installation of 'objective carcass measurement' in abattoirs, which could lead to further productivity benefits for participating producers.

Animal welfare

There are two major concerns regarding animal welfare and the supply chain for animals. The first of these is that animals who are exported live are subject to the Exporter Supply Chain Assurance Scheme (ESCAS) and it has been shown that selection and certification requirements of the ESCAS are at times poorly conducted. If ESCAS chooses to utilise the EID system, this could significantly improve this process by ensuring data on livestock numbers, source and movements are automatically collected. The second concern is supply chain management for domestic slaughter production. Animal welfare groups advocate for EID to help identify leaks in the supply chain where small numbers of animals are lost. Furthermore greater clarity of transit times and greater ability to mitigate disease outbreak would also have significant animal welfare benefits. Additionally, EID means that animals spend less time being manually counted in saleyards, reducing physical and mental stress. Some producers may also choose to utilise EID to track their animals' health and behaviour, leading to better on-farm animal welfare.

Food safety

Greater transparency throughout the food supply chain through EID could lead to benefits such as reducing productive time lost to trade restrictions and reduced consumption that occurs when there is an untraceable detection of contaminants in food. Furthermore contamination incidents carry significant enforcement costs that could be reduced through better traceability. Rapid, targeted and effective food recall would carry benefits in the form of reduced wastage and greater consumer protection. Electronic tagging would also allow producers to better manage at-risk animals for food hygiene compliance and reduce recurrence of food hygiene issues.

6.3 Costs of each option

6.3.1 Option 1: Remake existing Regulations

The significant cost impacts of Option 1 are set out below in relation to three elements:

- The requirement types (eg identification requirements include all cost related to tagging of livestock), tracing requirements (this includes all costs related to tracking the movement of livestock), testing (this includes all costs related to the testing of livestock for diseases), and prevention and notification (this includes all costs related to the prevention and notification of diseases).

¹²⁶ PwC, *Options assessment for the identification of sheep and goats*, prepared for the Victorian Department of Primary Industries, January 2010

¹²⁷ CIE, *NLIS (sheep and goats) business plan: The costs of full compliance with NLTPS*, prepared for Animal Health Australia, June 2010

¹²⁸ ABARES, NLIS Consultation RIS, October 2013, and ABARES NLIS Decision RIS, September 2014.

- Livestock type (eg cattle, sheep and goats, and pigs).
- Relevant parts of the supply chain (ie producers, stock and station agents, stock yards, abattoirs and knackeries).

Identification requirements

Producers of all livestock, with the exception of those specified in the Regulations, are required to apply to receive a Property Identification Code (PIC), and retire their PIC when they are no longer producing livestock. For all existing properties with a PIC, the cost of application has already been incurred. Therefore, only the cost of new properties applying for PICs is included in this analysis.

There is no cost to apply for a PIC, however, the time associated with applying for a new PIC for each new producer each year is considered to be around 30 minutes¹²⁹. We have assumed that over the 10 years of the Regulations, the number of new PIC applications will remain constant at the 2015 level of 3,228. This implies a time-related cost of \$123,250 per annum.

Similarly, the time associated with retiring PICs is also assumed to be 30 minutes¹³⁰, for each of the 1,204 PICs that were retired in 2015, with similar numbers assumed to be retired over the 10 year life of the proposed Regulations. This equates to a cost of \$45,971 per annum.

Cattle

Producers

Cattle in Victoria are currently required (through Order G39) to be electronically tagged before leaving their property of birth. However, as the powers for this Order originate from the Act rather than the Regulations, we have not attributed the costs of EID of cattle to the Regulations and hence not included the cost in this RIS.

Sheep and goats

Producers

The Regulations currently require that sheep and goats are tagged via either visual tagging or the newer EID system. This means that producers incur the cost of the tags and the cost of undertaking the tagging of all sheep and goats under their control.

Option 1 assumes that the EID system for sheep and goats in Victoria is optional, and it is estimated that only around 5 per cent of producers voluntarily opt to adopt electronic tags.¹³¹

The holistic cost (i.e. including subsidies) of the tags is currently around 35 cents for the visual tags and 73 cents for the electronic tags.¹³² This is lower than in other states due to bulk purchasing by DEDJTR.

This equates to a total cost (to mainly producers) of 12.5 million tags, at a total of \$4.4 million per annum in Victoria.¹³³

The labour cost of undertaking the tagging is estimated at 15 seconds per animal, at a rate of \$76 per hour of labour (including ongoing costs and overheads).¹³⁴

This equates to a total cost of time spent tagging of \$4.0 million per annum in Victoria.

¹²⁹ PwC assumption based on consultations.

¹³⁰ PwC assumption based on consultations.

¹³¹ Information provided by DEDJTR.

¹³² Information provided by DEDJTR.

¹³³ While the majority of tags are applied by producers, others in the supply chain like sale yards also need to have emergency tags on standby to tag any untagged livestock or apply to livestock to replace tags that have fallen off.

¹³⁴ Based on ABS average weekly earnings and oncost multiplier specified in the Victorian Guide to Regulation.

Pigs

Producers

The Regulations currently require that pigs over 25kgs are tagged via a permanent tattoo and pigs under 25kgs are tagged via an ear tag at every move to a new PIC. Based on information provided during consultations, the number of pigs under 25kgs being moved and requiring tagging is small and the cost difference between the two methods is negligible. Therefore all pigs are costed under the tattooing procedure. Producers incur the costs of tattooing and ear tagging for all pigs under their control.

The cost of tattooing is made up of equipment costs and labour costs. A 140g tube of pig tattoo paste costs around \$20, and it is estimated that one tube can tattoo at least 20 pigs, at a cost of \$1 per pig.

A tattoo plate and related equipment costs around \$230. The tattoo plate is estimated to be replaced every 3 years at a cost of \$230.¹³⁵ The total equipment cost of tattooing just over 900,000 pigs each year¹³⁶ is estimated to be \$947,525 per annum.

The labour cost of undertaking tattooing is estimated to be 20 seconds per animal, at a rate of \$76 per hour.¹³⁷ This implies a total labour cost of tattooing and tagging of pigs in Victoria at \$385,964 per annum.

Tracing requirements

Cattle

A person who dispatches cattle must provide their PIC to the receiver for almost all movements. We do not consider this requirement to be burdensome as any purchaser or receiver of livestock would require the dispatcher to provide this information in their normal course of business.

Producers

The Regulations currently require (through Notice S134) that the movement information of cattle recorded and the NLIS database is updated when they are transferred to a new PIC or to an abattoir or knackery for slaughter or disposal. The responsibility for updating the NLIS will only fall to producers in the case of a property-to-property transfer that is direct and not transacted through a sale yard.

It is estimated 8,426¹³⁸ such transactions occur per year and in such a case the primary method of update is via the NLIS database. It is estimated that recording movement information and updating the NLIS database takes producers approximately 30 minutes.¹³⁹ The associated total costs of recording and updating by producers is therefore \$321,717 per annum.

The Act requires that a national vendor declaration (NVD) is completed when cattle are moved from their place of birth. The costs of submitting the NVD are not attributed to the Regulations.

¹³⁵ The Farmers Mailbox, Tattoo Inks and Paste, <http://www.fmb.com.au/tattoo-equipment-1/pig-strikers>, accessed 27 July 2016.

¹³⁶ PwC has used an assumption informed by consultations that 80 per cent of all pigs slaughtered each year have been tattooed.

¹³⁷ Department of Primary Industries, (2006) Regulatory Impact Statement for proposed livestock disease control regulations.

¹³⁸ Information provided by DEDJTR.

¹³⁹ Information provided during consultations.

Stock and station agents

If a selling agent is administering the transaction of a sale not at a saleyard (eg a property-to-property sale) then they may incur some of the cost of scanning and uploading movement information to the NLIS on behalf of the purchaser.

Those costs are estimated in the same way as the costs for producers. There are estimated to be approximately 35,599 of these sales per year.¹⁴⁰ The total cost estimated for agents is \$1.4 million per annum.

Saleyards

The Regulations require that cattle scale operators and saleyard operators record movement information for each head of cattle sold or passed in, and forward the movement information and PICs onto the Secretary through the NLIS database. It is estimated that 66,112 such recordings occur annually,¹⁴¹ and that each recording and upload takes a saleyard 6 minutes,¹⁴² aggregating to a total cost of \$1.2 million per annum.

Auctioneers of cattle at a saleyard must also provide the PIC and serial number of each head of cattle to the saleyard operator. However, this information would likely be exchanged in the normal course of business, so is not attributed to the Regulations.

Abattoirs and knackeries

Under the Regulations, abattoir operators must record the prescribed details of any cattle carcass sold, and keep these records for seven years to be made available to an inspector. It is estimated that the recording of documentation for approximately 46,514 sales of cattle carcasses would take approximately 6 minutes¹⁴³ at a time, with a cost of \$325,595 annually.¹⁴⁴

Abattoir and knackery operators must also ensure the prescribed details are provided to the purchaser of the cattle carcass, however, this appears to be part of the normal course of business and is not attributed to the Regulations.

The operator of an abattoir or knackery must, under the Regulations record the weight of any slaughtered calves under six weeks at certain times after the slaughter. There are little data available on this activity and as such it will not be qualitatively assessed.

Sheep and goats

A person who dispatches sheep or goats must provide their PIC to the receiver for almost all movements. We do not consider this requirement to be burdensome as any purchaser or receiver of livestock would require the dispatcher to provide this information in their normal course of business.

Producers

It is required that a NVD is completed at any time that sheep or goats are to be moved to a different property from their place of birth. The power for this requirement originates under the Act and so the costs of filling out this NVD form and providing it to the new owner are not attributed to the Regulations.

¹⁴⁰ PwC assumption based on information provided by DEDJTR. Note that some of these sales may be managed by the producer alone, but due to the lack of data on these sales, we have assumed that all are conducted by stock agents. The economic impact of the requirement is generally similar notwithstanding who conducts the sale.

¹⁴¹ PwC assumption based on information provided by DEDJTR.

¹⁴² Consultations with stakeholders indicated that saleyards generally undertook bulk uploading of data. Therefore the time per upload is far lower than for producers or agents.

¹⁴³ Information provided during consultations.

¹⁴⁴ Consultations with stakeholders indicated that abattoir operators generally did not put extensive effort into ordering and filing documents, and therefore no cost burden is attributed to the storing of documents.

Stock and station agents

Regulation 56 specifies prescribed information about sheep and goats being sold by any stock/station agent that must be recorded and supplied to their purchaser and kept for 7 years. Beyond what would be recorded, supplied and kept in the normal course of business, it is estimated that this requirement would take 6 minutes,¹⁴⁵ at a total time cost of \$243,038 per annum.

Agents must also produce a post-sale summary or provide buyers with a copy of the vendor's NVD, however this requirement is imposed by Order S173 under the Act and will therefore not be attributed to the Regulations.

Saleyards

The Regulations require that auctioneers must record and supply particulars (such as name and address of seller and purchaser, date and location of sale, and description and species of livestock) to the seller and kept for seven years. Beyond what would be recorded, supplied and kept in the normal course of business, it is estimated that this requirement would take 6 minutes for each of the approximately 64,480 sales in saleyards each year,¹⁴⁶ at a total time cost of \$451,356 per annum.

Saleyard operators must record the required mob-based movement information and transmit this information to the Secretary by uploading it to the NLIS. This requirement is specified in Order S173 in the Act, and is therefore not attributable to the Regulations.

Abattoirs and knackeries

Under the Regulations, abattoir operators must record the prescribed details of any sheep or goat carcase sold, and keep these records for seven years to be made available to an inspector. It is estimated that the recording of documentation for approximately 62,149 sales each year¹⁴⁷ would take approximately 6 minutes at a time cost of \$435,040 annually.

Pigs

Producers

The Act (through Order G12) require that a Pig Pass National Vendor Declaration (PPNVD) must be completed every time a pig is moved from its place of birth, unless the animal is already dead and being transported to a knackery or there is no change of ownership of the pig. The costs associated with filling out the NVD and providing it to the relevant parties are not associated with the Regulations.

For every private pig sale, the owner must provide details regarding the pig to the purchaser. This information is likely to be provided in the normal course of business and does not add material burden to the small number of private pig sales.¹⁴⁸

Stock and station agents

The Regulations (Section 56) require that any stock/station agent record and supply the prescribed information about the pigs being sold to their purchaser. Consultations with stakeholders indicated that a very small number of pigs are sold through agents, and as such, this requirement is considered immaterial.

Saleyards

Cattle scale operators, auctioneers and calf dealers must ensure that prescribed details about any pigs sold are recorded and kept for seven years to be made available to an inspector.

¹⁴⁵ PwC assumption based on consultations.

¹⁴⁶ PwC assumption based on information provided by DEDJTR.

¹⁴⁷ PwC assumption based on consultations.

¹⁴⁸ Consultations with stakeholders indicated that current compliance with this requirement was low.

Consultations with stakeholders indicated that a very small number of pigs are sold through saleyards, and as such, this requirement is considered immaterial.

Abattoirs and knackeries

Under the Regulations, abattoir operators must record the prescribed details of any pig carcass sold, and keep these records for seven years to be made available to an inspector. This requirement is estimated to add around six minutes of extra work for each of the 1,589 sales of pig carcasses each year,¹⁴⁹ at a total time cost of \$11,123 annually.

Testing, prevention and notification

Producers

Producers have three key testing, prevention and notification requirements under Option 1:

- The Secretary must be notified of any adverse reaction to vaccination.
 - Notifying the Secretary is estimated to take producers 10 minutes¹⁵⁰ per notification for each of the approximately 4,000 notifications per year,¹⁵¹ costing \$50,977 per year in time costs.
- The tag numbers of animals must be recorded before they can be vaccinated against Johne's disease. Producers would likely record tag numbers for record-keeping and verification purposes in their normal course of business, and as such, the cost of complying with this requirement is not attributed to the Regulations.
- The Secretary must be notified of any unusual circumstances of death.
 - DEDJTR estimates that this requirement adds approximately 10 minutes¹⁵² to what producers would likely do if their livestock suffered an unusual death. There are estimated to be 2,191¹⁵³ such notifications per year, at a total time cost of \$27,885 per annum.

Vets and laboratories

Under the Regulations, vets and laboratories have certain obligations:

- Each vet must obtain authorisation to vaccinate against certain diseases. This is assumed to take 10 minutes per authorisation per year for each of the 1,407 vets dealing with livestock in Victoria,¹⁵⁴ with an overall time cost of \$17,907 per annum.
- Laboratories dealing with livestock disease must maintain their facilities to ANZSDP standards. Eight laboratories in Victoria¹⁵⁵ are compliant with these standards, at an annual cost of \$25,000 each,¹⁵⁶ and \$200,000 annually.
- The Regulations also require that exotic disease agents be kept at the Australian Animal Health Laboratory in Geelong or another approved laboratory. There is little information available on the number or type of these agents and the cost of securing them. The cost of this requirement will therefore not be included in this RIS.

¹⁴⁹ PwC assumption based on consultations.

¹⁵⁰ Information provided by DEDJTR.

¹⁵¹ PwC assumption based on information provided by DEDJTR.

¹⁵² Information provided by DEDJTR.

¹⁵³ Information provided by DEDJTR.

¹⁵⁴ Information provided by DEDJTR.

¹⁵⁵ Information provided by DEDJTR.

¹⁵⁶ PwC assumption based on consultations.

- Laboratories must also record, forward to the Secretary, and keep for seven years, the records of each test, analysis or diagnostic examination. The recording and archiving of test results is assumed to be conducted by laboratories as a normal course of business, and notifying the Secretary is estimated to take 10 minutes, for each of the 1,197 tests conducted each year.¹⁵⁷ This implies a total time cost of \$15,234 per annum.

Table 17: Breakdown of costs for Option 1 (\$million)

Option 1	10 year (NPV)	10 year (nominal)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Identification	83.3	98.7	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9
Tracing	2.7	3.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Testing, prevention and notification costs	2.4	3.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Total	88.4	105	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5

6.3.2 Option 2 – Re-make the Regulations (as at 1 July 2016), and introduce enhanced visual and mob-based identification for sheep and goats (and incorporating the NLIS Pig Traceability Standards into the Regulations)

The significant costs that differentiate Option 2 from Option 1 are listed below.

Identification requirements

Sheep and goats

Producers

The enhanced mob-based requirements would specify that producers must replace every missing tag with an accredited tag. This is effectively already required under Order S173 and it is not expected that this will incur extra cost over and above that of the Order and Option 1.

Tracing requirements

Many of the tracing requirements under Option 2 relate to NVDs. The completion of NVDs is required by the Act and Order S173 made under the Act and is not attributable to the Regulations, however, the marginal increase in burden imposed by Option 2 requirements will be considered below.

Sheep and goats

Producers

The enhanced mob-based requirements would require producers who purchase sheep or goats to upload a PDF of the verified NVD to the NLIS database. It is estimated 8,218 of these purchases (primarily producer-to-producer purchases) occur per year,¹⁵⁸ and the upload would take five minutes,¹⁵⁹ implying a total time cost of \$52,296 per annum.

Stock and station agents

¹⁵⁷ PwC assumption based on information provided by DEDJTR.

¹⁵⁸ PwC assumption based on information provided by DEDJTR.

¹⁵⁹ PwC assumption based on consultations.

The enhanced mob-based requirements would require stock and station agents who manage facilities where sheep or goats are sold to upload a PDF of the verified NVD to the NLIS database. It is estimated 34,720 of these purchases occur per year,¹⁶⁰ and the upload would take 5 minutes,¹⁶¹ implying a total time cost of \$220,944 per annum.

Within saleyards, stock agents would also be required to take a sample of each consignment of sheep or goats prior to sale in each consignment. They would be required to manhandle the animals to confirm that the PICs on the tags match the PICs on the NVD, and replace missing tags. Sampling would be estimated to take at least 30 minutes¹⁶² for each 90 per cent¹⁶³ of the 64,480 sales in saleyards conducted each year, at a total time cost of \$2.2 million per annum. Following a sale in a saleyard, stock agents would also be required to conduct a sample prior to loading, to ensure that all and only the PICs of mobs are on the NVD. This would also cost an estimated \$2.2 million per annum.

Saleyards

The enhanced mob-based requirements would require saleyards who purchase sheep or goats to upload a PDF of the verified NVD to the NLIS database. It is estimated 64,480 of these purchases occur per year,¹⁶⁴ and the upload would take five minutes,¹⁶⁵ implying a total time cost of \$410,324 per annum.

Abattoirs and knackeries

The enhanced mob-based requirements would require abattoirs who purchase sheep or goats to upload a PDF of the verified NVD to the NLIS database. It is estimated 62,149 of these purchases occur per year,¹⁶⁶ and the upload would take 5 minutes, implying a total time cost of \$256,060 per annum.

Abattoirs would also be required to identify and track down the source of animals without tags. It is estimated this would require an extra 10 minutes of time¹⁶⁷ for the five per cent of sheep and goats that arrive at abattoirs without tags.¹⁶⁸ This implies a total time cost of \$5.7 million per annum. Abattoirs would be required to notify DEDJTR if more than two per cent of animals in a mob are untagged. It is unclear how many mobs coming into abattoirs will trigger this requirement, and whether this would add significant effort to abattoir operations.

As well as tracking down sheep and goats without tags, abattoirs will need to verify tags against the NVD for each animal. This is likely to require manual or sophisticated photographic (visual recognition) systems. Although visual recognition software is improving, the poor condition of tags, unpredictable movements by animals, and darkened rooms make it difficult at this stage for cameras to autonomously read tags.¹⁶⁹ A manual system (accompanied by a touchscreen) is therefore likely to be used. This is estimated to take on average 30 seconds for each of the 14.8 million sheep, lambs and goats slaughtered each year, at a total time cost of \$9.4 million per annum.

Government

¹⁶⁰ PwC assumption based on information provided by DEDJTR.

¹⁶¹ PwC assumption based on consultations.

¹⁶² PwC assumption based on consultations.

¹⁶³ Advice provided by DEDJTR.

¹⁶⁴ PwC assumption based on information provided by DEDJTR.

¹⁶⁵ PwC assumption based on consultations.

¹⁶⁶ PwC assumption based on information provided by DEDJTR.

¹⁶⁷ PwC assumption based on consultations.

¹⁶⁸ Advice provided by DEDJTR.

¹⁶⁹ Advice received in consultations.

The enhanced mob-based requirements would require extensive auditing of saleyards and abattoirs. DEDJTR would hire six full-time saleyard inspectors, one full-time abattoir inspector and one full-time abattoir auditor to fulfil this requirement¹⁷⁰, at a cost of \$100,000 (including ongoing costs) per annum, as well as \$1,000 for training.¹⁷¹ This would imply a total cost of \$808,000 in the first year, and \$800,000 in subsequent years.

Pigs

Producers

In practice, this means that moving most of the requirements in the NLIS Pig Traceability Standards into the options would primarily require that pig movement information is recorded and uploaded into the NLIS system. In line with the requirements for sheep, this is estimated to take producers around 30 minutes¹⁷² for each of the estimated 318 instances (see below) where producers will comply, with a total time cost of \$12,134 per year.

As a high level observation informed by information collected as part of the consultation process, larger producers in the pig industry are, generally, already complying with the NLIS traceability requirements. This covers a significant proportion of all pigs in the industry.

At the other end of the spectrum however, small/hobby pig farms generally do not (and are not currently required to) comply with the NLIS traceability standards, but would be required to comply should the requirements be included in the Regulations in the future. However, due to the small scale of these farms, DEDJTR does not have information on many of these establishments, and enforcement would be challenging. It was generally regarded by some stakeholders during the consultation process that it would be difficult to enforce and therefore significant compliance may not be a likely outcome.

Of the approximately 1,589 shipments of pigs to abattoirs each year¹⁷³ (pigs generally go straight from farm to abattoir and are not sold through saleyards or agents i.e. a vertically integrated system), we assume that only 20 per cent (making up 318 shipments) of producers are likely to change their behaviour, with the remainder either complying with the regulatory requirements already, or being micro-operators who will not comply (or even be aware of the requirements).

Table 18: Breakdown of costs for Option 2 (\$million)

Option 2	10 year (NPV)	10 year (nominal)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Identification	83.3	98.7	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9
Tracing	183.2	217.2	21.7	21.7	21.7	21.7	21.7	21.7	21.7	21.7	21.7	21.7
Testing, prevention and notification costs	2.4	3.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Total	268.9	319	31.9	31.9	31.9	31.9	31.9	31.9	31.9	31.9	31.9	31.9

¹⁷⁰ Advice provided by DEDJTR (which is consistent with the 2014 ABARES NLIS DRIS).

¹⁷¹ Advice provided by DEDJTR.

¹⁷² PwC assumption based on consultations.

¹⁷³ Information provided by DEDJTR.

6.3.3 Option 3 – Remake the existing Regulations but require EID for sheep and goats as part of a phased-in approach (and incorporating the NLIS Pig Traceability Standards into the Regulations)

The significant costs that differentiate Option 3 from Option 1 are listed below (including the costs avoided by no longer requiring visual tags).

Identification requirements

Sheep and goats

Producers

This option requires producers to tag their sheep and goats with EID tags instead of visual tags. The total cost of each electronic tag sold by DEDJTR is estimated to be around 80 cents (including any subsidies by the Government),¹⁷⁴ however, the price to producers and other industry participants may be lower due to Government subsidies. There are two subsidy levels as follows:

- a) Producers are able to purchase white electronic NLIS (Sheep) tags for their 2017 born lambs and kids at ‘cost neutral’ prices equivalent to the prices that they are likely to have paid for visually readable NLIS (Sheep) tags in 2016. The retail price of the cheapest ‘cost neutral’ electronic tag has been set at \$0.35 per tag. Other popular brands are available for slighter higher prices.
- b) Producers can also purchase electronic tags for the identification of lambs and kids born prior to 2017. The cheapest tag brand retails for \$0.73 each. There are no limits or conditions associated with purchasing electronic NLIS (Sheep) tags, including white and pink tags, at standard prices. The cheapest tag in this price range is available for \$0.73 per tag.

With approximately 11 million sheep and goats to be electronically tagged each year,¹⁷⁵ this equates to a total cost (mainly to producers) of tags of \$8.8 million per annum in Victoria.¹⁷⁶ This requirement would only relate to sheep and goats born on or after 1 January 2017, with sheep and goats born before this date receiving an exemption until 1 January 2022 before they would need to be tagged. This transition period would help to smooth producers’ ability to comply with the regulations, while also removing the need for many animals to be electronically tagged at all, as by three years old, many animals have already been slaughtered.

The labour cost of undertaking the tagging is estimated at 15 seconds per animal, at a rate of \$76 per hour of labour (including ongoing costs). This equates to a total cost of time spent tagging of \$3.5 million per annum in Victoria.

Furthermore, producers will need to equip themselves with new applicators for EID tags, at a cost of approximately \$13 each.¹⁷⁷ In Year 1, this will cost \$273,970 for 80 per cent¹⁷⁸ of each of the 27,397 active PICs with sheep and goats (this includes saleyards, abattoirs, etc. who will likely also need applicators), while replacement of manual applicators every 3 years will cost another \$273,970 for every year thereafter (as all producers would buy them in Year 1).

¹⁷⁴ PwC assumption based on information provided by DEDJTR. Note that costs may be lower depending on the final Government subsidy and discounts due to bulk purchasing.

¹⁷⁵ Information provided by DEDJTR.

¹⁷⁶ While the majority of tags are applied by producers, others in the supply chain like sale yards also need to have emergency tags on standby to tag any untagged livestock or apply to livestock to replace tags that have fallen off.

¹⁷⁷ Information provided by DEDJTR.

¹⁷⁸ It is estimated by DEDJTR that 20 per cent of properties would already have an applicator that is suitable for electronic tags.

Those producers (or other industry participants) who choose to import sheep and goats from other states will be required to electronically tag these animals from 1 January 2019, prior to movement from their Victorian property. Up to 7.0 million sheep and goats in Victoria arrive from interstate each year, however, around 5.0 million go directly to abattoirs for slaughter (and are therefore exempt from being electronically tagged). The remaining 2.0 million sheep and goats are transported in for grazing, and will need EID.¹⁷⁹ Tagging the 2.0 million sheep will impose an annual equipment cost of \$1.6 million and labour cost of \$318,179 from the start of 2019.

Under Option 3, from 1 January 2022, all remaining sheep would be required to be electronically tagged. To tag all of the 1.6 million sheep and goats born prior to 1 January 2017 that will still be alive in 2022¹⁸⁰ is estimated to impose a once-off equipment cost of \$1.3 million and labour costs of \$509,087 in 2022.

The EID system will replace the visual tagging system required under Option 1. This will avoid \$8.4 million per year in cost that producers (and saleyards) would otherwise incur.

Producers may not incur the total cost of equipment upgrades required by Option 3 due to potential grants provided by Government (as detailed in Section 7.4).

Saleyards

Under this option, saleyards must equip themselves with electronic scanners to read the EID tags of sheep and goats. Electronic scanners cost on average \$10,000 each,¹⁸¹ and it is estimated that saleyards will need on average one fixed scanner per 2,500 sheep at sale.¹⁸² Given the various capacities of saleyards in Victoria, this equates to around four scanners on average. This equates to \$1.2 million in the first year only.¹⁸³

There was a range of estimates for the operating cost (for software upgrades, data logging tools, etc.) of EID in saleyards. The middle range of these estimates was around \$0.12¹⁸⁴ for each of the 3.9 million yardings through saleyards,¹⁸⁵ equating to \$477,425 per annum. The Government is fully funding the installation of EID scanning equipment in Victorian saleyards and abattoirs.¹⁸⁶

Abattoirs and knackeries

Abattoirs and knackeries will be required to equip themselves with electronic scanners to identify individual sheep and goats before slaughter. Consultations with industry indicated that abattoirs and knackeries were likely to take varying approaches depending on size, and may choose either handheld scanners or permanent/fixed scanners. However, it appears that most abattoirs and knackeries already have suitable equipment as they process bobby calves, which require EID.

DEDJTR estimates that up to six abattoirs in Victoria are yet to install readers suitable to process sheep and goats. Each reader is estimated to cost between \$15,000 and \$30,000 depending on site requirements.¹⁸⁷ Taking \$22,500 as a middle estimate, this implies a total cost of \$162,000.

¹⁷⁹ Information provided by DEDJTR.

¹⁸⁰ Information provided by DEDJTR.

¹⁸¹ PwC assumption based on information provided by DEDJTR.

¹⁸² Information provided by DEDJTR.

¹⁸³ DEDJTR advises that EID readers have a life of longer than 10 years.

¹⁸⁴ Middle range of estimates from stakeholders.

¹⁸⁵ NLRS Statistics Database.

¹⁸⁶ Information provided by DEDJTR.

¹⁸⁷ Information provided by DEDJTR.

It is estimated to cost abattoirs 5 cents per head¹⁸⁸ to operate the EID readers and system (including rescanning and rectifying sheep and goats that were missed) for each of the 14.8 million slaughters of sheep, lambs and goats per year, at an estimated annual cost of \$740,045.

Live export terminals

Live export terminals will be required to equip themselves with electronic scanners to identify individual sheep and goats before loading. The cost and complexity of fitting out the three¹⁸⁹ main live export terminals in Victoria is estimated by DEDJTR to be similar to that of a saleyard. This implies a one-off initial capital cost of \$10,000 for four readers for each of the three terminals terminal, totalling \$120,000 for Year 1. In addition, there would be \$0.12 in operating costs for each of the approximately 470,000 that pass through Victorian live export terminals each year, totalling \$56,400 each year.

Tracing requirements

Sheep and goats

Producers

Option 3 would require that movement information is recorded, and the NLIS is updated each time sheep and goats are transferred to a new PIC.

It is estimated that 8,218 such transactions (including those undertaken by agents on behalf of producers) occur per year¹⁹⁰ and in such a case the primary method of update is via electronic upload to the NLIS, taking three minutes. The associated total costs of recording and updating by producers is therefore \$31,378 per annum.

Stock and station agents

If a stock/station agent is administering the transaction of a property-to-property sale then they may incur some of the cost of scanning and uploading information to the NLIS on behalf of the purchaser.

Those costs are estimated in the same way as the costs for producers for each of the estimated 34,720 sales of sheep and goats through agents each year.¹⁹¹ The total labour cost estimated for agents is \$132,566 per annum.

¹⁸⁸ ABARES, NLIS Decision Regulatory Impact Statement, 2014.

¹⁸⁹ Two at Portland and one at Geelong. Tullamarine and Avalon airports transport some livestock but not in significant numbers.

¹⁹⁰ PwC assumption based on information provided by DEDJTR.

¹⁹¹ PwC assumption based on information provided by DEDJTR. Note that some of these sales may be managed by the producer alone, but due to the lack of data on these sales, we have assumed that all are conducted by stock agents. The economic impact of the requirement is generally similar notwithstanding who conducts the sale.

Agents

Agents must record mob-based information (including information such as number of animals, origin and destination PIC, all previous PICs present, etc.) and upload to the NLIS database. Agents are exempt from this requirement if they undertake a sampling exercise to cross-check the movement information prior to sale. Consultation with industry indicated that saleyard operators are likely to capture individual information for each head due to the external benefits (such as pricing data, monitoring of weight, etc.). As such, for each of the approximately 64,480 sales of sheep or goats through saleyards each year¹⁹², we have assumed that the additional labour burden of complying with the Option 3 requirements are three minutes per sale,¹⁹³ giving a total cost of \$246,194.

Abattoirs and knackeries

The operator of an abattoir or knackery must, at the time of the slaughter or disposal of sheep and goats at an abattoir or knackery, make a record of the slaughter or disposal that includes the date, PIC, number of individual livestock and within seven days of the slaughter or disposal, notify the NLIS database. This is costed in the same way as for saleyards, at a total time cost of \$237,294 per annum for the 62,149 consignments to abattoirs each year.¹⁹⁴

Live export terminals

Under Option 3, live export terminals would be required to ensure that all electronic tags on sheep and goats are read and recorded on the NLIS database. The requirement to update the NLIS for each of the approximately 90 consignments of sheep and goats to live export terminals is estimated to take three minutes for each upload,¹⁹⁵ at a total time cost of \$344 per year.

Pigs

The costs of this option are as per Option 2 above.

Table 19: Breakdown of the costs of Option 3 (\$million)

Option 3	10 year (NPV)	10 year (nominal)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Identification	197.1	235	17.9	22.8	23.9	24.2	23.9	26.3	24.2	23.9	23.9	24.2
Tracing	8.3	9.8	1	1	1	1	1	1	1	1	1	1
Testing, prevention and notification costs	2.4	3.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Total	207.7	247.9	19.2	24.1	25.2	25.5	25.2	27.6	25.5	25.2	25.2	25.5

¹⁹² PwC assumption based on information provided by DEDJTR.

¹⁹³ PwC assumption based on consultations.

¹⁹⁴ PwC assumption based on information provided by DEDJTR.

¹⁹⁵ PwC assumption based on consultations.

6.3.4 Option 4 – Remake existing Regulations, requiring EID for sheep and goats, and exempt sheep and goats born before 1 January 2017 from being electronically tagged (and incorporating the NLIS Pig Traceability Standards into the Regulations)

The significant costs that differentiate Option 4 from Option 3 are listed below.

Identification requirements

Sheep and goats

Producers

Unlike Option 3, this option does **not** require producers to tag their sheep and goats born prior to 1 January 2017 to ever be fitted with electronic ID tags. This means that they will continue to be tagged with visual tags (if tags are replaced, the producer may choose to fit them with an electronic tag) for the remainder of their lives.

On 1 January 2022, there are estimated to be 1.6 million sheep and goats alive that were born prior to 1 January 2017. Producers not having to tag these sheep and goats with EID will avoid \$1.3 million in equipment cost, and \$509,087 of time cost for 2022 (Year 6 in Table 20).

Table 20: Breakdown of the costs of Option 4 (\$million)

Option 4	10 year (NPV)	10 year (nominal)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Identification	195.1	232.6	17.9	22.8	23.9	24.2	23.9	23.9	24.2	23.9	23.9	24.2
Tracing	8.3	9.8	1	1	1	1	1	1	1	1	1	1
Testing, prevention and notification costs	2.4	3.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Total	205.8	245.5	19.2	24.1	25.2	25.5	25.2	25.2	25.5	25.2	25.2	25.5

Total costs of options

The total costs of each option are summarised below.

Table 21: Estimated costs of options (\$million) (10 year NPV)

Option	Identification costs	Tracing costs	Testing and notification costs	Total costs
Option 1	83.3	2.7	2.4	88.4
Option 2	83.3	183.2	2.4	268.9
Option 3	197.1	8.3	2.4	207.7
Option 4	195.1	8.3	2.4	205.8

Table 21 sets out the costs of each option under identification requirements, tracing requirements, testing and notification requirements. It also provides the total costs for each option.

It shows that the majority of the costs under each option relate to the identification requirements. It is only in the Enhanced Mob-based Option 2 where tracing costs become the largest cost component under that option as it utilises a more manual, labour-intensive approach to traceability than for Options 3 and 4.

For every other option tracing cost remain at between two to three per cent of the overall cost of that option.

Likewise, testing and notification costs are only between one and four percent of total costs under each option.

Although Option 1 is the lowest cost option it does not mean that this option is preferred. This must also be compared to the benefits generated under each option which is considered below. However, in addition to the costs above, there are some costs that have not been included in this quantification that are discussed below.

6.4 Non-quantified costs

Options 1 to 4 are also likely to have an impact on the ‘bee’ industry. However, the Regulations don’t require tagging requirements for bees (for obvious reasons) and the requirements are comparatively less onerous. The majority of the requirements relate to moving bees across state borders, and would be partially incurred by people in other states of Australia.

No information on the movement of bees across borders has been available, however the total cost of these requirements is believed to be relatively less significant than that of other regulatory costs in this RIS, although DEDJTR welcomes feedback on this aspect.

Due to the much lower quantum of these costs, we have sought to focus the RIS on the much higher impact requirements around cattle, sheep, goats and pigs. However, this is not to say that these regulations do also impose a cost on participants in the Australian apiary industry.

6.5 Results of break-even analysis

Table 22 shows the summary assessment of each option in relation to:

- the estimated cost (in NPV terms over the 10 year assessment period)
- the reduction in the severity of major disease incidents required for the option to break-even (based on the estimated cost of a major FMD outbreak in Victoria)
- an assessment of the two components required for good traceability (timeliness and accuracy as discussed above), which affects the likelihood that the benefits of containing the severity of the impacts of a disease outbreak will be realised.

Table 22: Assessing the costs and benefits of the options

Option	Description	Cost (NPV over 10 years)	Required reduction in severity of a major incident needed to break even ¹⁹⁶	Traceability	
				Time until tracing can be completed	Expected accuracy of tracing
Option 1	Visual mob-based	\$88.4m	3.8%	Over a week	Poor
Option 2	Enhanced mob-based	\$268.9m	11.5%	Over a week	Moderate
Option 3	EID	\$207.7m	8.9%	A few hours	Very good
Option 4	EID with exemptions	\$205.8m	8.8%	A few hours	Good/very good

The break-even point is based on the reduction in the severity of a major incident needed to at least fully offset the cost of each Option. For all Options, only a small reduction in severity is required in order to break-even, and DEDJTR believes that any of the options would reduce the severity of incidents by at least as much as required by the break-even analysis.

¹⁹⁶ This is calculated by dividing the cost of the Option over 10 years (in NPV terms) by the expected impact of a major incident in each given year (ie \$15.7bn every 67 years equates to a \$2.34bn expected avoided cost over 10 years). For Option 1, this break-even level is 3.8 per cent (\$88.4m NPV cost over 10 years divided by \$2.34bn expected avoided cost over 10 years).

This suggests that all Options are preferable to the base case, given that the measures would allow the Government to control and better contain any outbreak, if it were to occur.

Options 3 and 4 are most likely to reduce the severity of outbreaks and provide the greatest benefits due to the timeliness and expected accuracy of traceability (and thus provide the greatest benefits). In contrast, information provided by DEDJTR and stakeholders indicated that Options 1 and 2 would deliver a significantly lower reduction in the severity of an incident, because under these options it would take longer to trace an outbreak. While Options 3 and 4 would incur costs of more than double those of Option 1, DEDJTR experts consider that the significantly faster traceability (ie a few hours compared with more than a week) would be expected to deliver benefits that more than exceed the additional costs of these options.

Option 3 is the preferred option because it provides the appropriate balance between protection from the risk associated with livestock disease outbreak (through full traceability from 1 January 2022) and allowing sufficient time for interstate and smaller producers to adjust to the new requirements.

Its increased protection from the risk of livestock disease outbreaks (relative to Option 4) outweighs its slightly higher cost (\$205.8m vs \$207.7m over 10 years). That is, Option 3 is expected to lead to a greater than 0.1 per cent reduction in the severity of a major outbreak (as compared with Option 4), and therefore is expected to offset its additional cost.

In addition, Option 3 provides for easier compliance in saleyards (from 1 January 2022) as compared with Option 4. This is because it can be difficult to quickly distinguish four year-old sheep (who would need an electronic tag) from six year-old sheep (who, under Option 4, would not need an electronic tag from 1 January 2022).

It is important to note that while the break-even analysis uses disease outbreak as the example of a major incident, the benefits of improved traceability would also reduce the likely impact of a chemical residue or animal welfare issues.

7 Preferred option and implementation considerations

7.1 Determination of preferred option

Option 3 is preferred because it is expected to provide the greatest level of benefits in comparison to the costs that it will incur. Option 3 is expected to deliver far greater benefits than Options 1 and 2 due to the ability of EID to quickly and accurately trace animals. It will be marginally more expensive to implement compared to Option 4, however it does not expose the Victorian livestock industry to the risks associated with exempting the requirement to electronically tag sheep and goats born prior 1 January 2017.

In summary, the preferred option (Option 3) includes remaking the Regulations (as at July 2016), with the following changes:

- Mandatory EID for all sheep and goats born on or after 1 January 2017. Those born before 1 January 2017 will be exempted from the requirement to be electronically tagged until 1 January 2022. Sheep and goats born on or after 1 January 2017 coming from interstate and introduced onto a Victorian property will be required to be tagged on dispatch from that Victorian property from 1 January 2019.
- Incorporating the current NLIS Pig Traceability Standards into the Regulations.
- Incorporating a number of Orders and notices made under the Act into the Regulations for administrative efficiency (which industry is already required to comply with).

The stated exemption should not increase the risk of a major outbreak of livestock disease as mortality rates for Foot and Mouth Disease are generally far higher for younger animals, and as such the risk to older animals is lower.

The cost benefit analysis in Chapter 6 shows that Option 4 was more costly than Option 1. However, it scores highly on the level of traceability, which helps to deliver the resulting reduction in the risk of a major livestock disease outbreak.

The Department of Justice and Regulation (DJR) has confirmed that the preferred option does not limit any human rights set out in the Charter of Human Rights and Responsibilities. A draft Human Rights Certificate is attached as Appendix F.

The remainder of this chapter presents the small business, competition, implementation and enforcement, and evaluation aspects of the preferred option.

7.2 Impact on small businesses

Over 90 per cent of farms in the agriculture industry have an annual revenue of under \$1 million per year, and almost all other market participants are small or medium-sized businesses. The preferred option attempts to minimise burden on small businesses by:

- introducing subsidies for EID tags to reflect the public good of better disease control
- provide increased timelines for the commencement of EID for certain animals
- minimise labour-intensive activity (in comparison to Option 2) by utilising technological solutions
- implementing requirements that will protect small business owners from the effects of livestock disease risks
- consulting with industry to design the Regulations.

It is possible that Option 3 may increase fixed costs for new producers, and agent and saleyard businesses.

7.3 Competition assessment

As recommended in the Victorian Guide to Regulation, identifying any restrictions to competition from the preferred option is an important step to show that any limitations resulting from the Regulations are necessary to fulfil its objectives. This includes weighing whether the benefits of the restriction outweigh the costs in each particular case. Any regulations in Victoria must not restrict competition unless it can be demonstrated that:

- the benefits of the restriction, as a whole, outweigh the costs
- the objectives of the legislation can only be achieved by restricting competition.

Regulations are considered to have an impact on competition if any of the questions in Table 23 below can be answered in the affirmative. The table shows the rationale and significance of those areas where there is an impact on competition.

Table 23: Assessment of significance of potential competition impacts

Issue	Answer	Significance
Is the proposed measure likely to affect the market structure of the affected sector(s) – i.e. will it reduce the number of participants in the market, or increase the size of incumbent firms?	No.	
Would it be more difficult for new firms or individuals to enter the industry after the imposition of the proposed measure?	No.	
Would the costs/benefits associated with the proposed measure affect some firms or individuals substantially more than others (for example, small firms, part-time participants in occupations, etc)?	No.	
Would the proposed measure restrict the ability of businesses to choose the price, quality, range or location of their products?	Yes.	Producers will only be required to fit certain types of electronic RFID tags to their livestock, as specified by DEDJTR. However, DEDJTR will undertake a bulk purchasing initiative to push the price of these tags down.
Would the proposed measure lead to higher ongoing costs for new entrants that existing firms do not have to meet?	No.	
Is the ability or incentive to innovate or develop new products or services likely to be affected by the proposed measure?	No.	

7.4 Implementation

Implementation of the preferred option will largely be based on the processes already established and used as part of the Regulations.

7.4.1 Assistance to industry

In order to assist industry with the implementation of the preferred option (especially the new EID requirements for sheep and goats), the Government announced a \$17 million transition package on 11 November 2016. This package was developed following consultation with industry and key stakeholders and includes:

- subsidised tags
- infrastructure grants
- co-funded equipment grants
- education program to support sheep and goat producers, agents, transporters, saleyards and meat processors.

Producers

Producers receive cost neutral tags (through government subsidies and bulk purchasing to bring the price of the cheapest tag to \$0.35 in 2017, the same as the current price for a visual tag), cheaper tags in future through a tag tender process, a tag buyback option for producers who had already bought 2017 visual tags, grants of up to \$3,000 to purchase readers or software to maximise benefits of EID (up to \$7.7 million for a 12 month period).

Saleyards

Saleyards will be offered grants for RFID tag readers, any required modifications to the saleyards and to purchase and install infrastructure and equipment required to meet the regulatory requirements, undertake planning and design activities in saleyards and abattoirs, and accessing technical support and consultants.

Agents

Livestock agents will be offered grants to undertake training and purchase required equipment.

Abattoirs and knackeries

Abattoirs and knackeries will also be offered grants for RFID tag readers, and any infrastructure upgrades and technical support.

Transporters

Livestock transporters will be offered grants of up to \$2,500 to purchase readers in order to offer scanning services to clients.

7.4.2 Communication

Effective communications and engagement plans are intended to improve the understanding and acceptance of mandatory sheep and goat EID by industry and stakeholders.

To date, DEDJTR has consulted with the following groups:

- Victorian Farmers Federation (Livestock Group)
- Australian Livestock Saleyard Association
- Australian Livestock Markets Association
- Australian Livestock and Property Agents Association

- Victorian export and domestic meat processors
- Victorian saleyards
- Victorian livestock agents and transporters
- Industry consultants and contractors
- Victorian sheep and goat producers
- Sheepmeat Council of Australia
- Wool Producers Australia
- Australian Meat Industry Council
- Meat and Livestock Australia
- Australian Wool Innovation
- SAFEMEAT
- Animal Health Australia
- Commonwealth and other state/territory governments
- Tag manufacturers
- Infrastructure, hardware and software suppliers.

DEDJTR has also invited public comment on the changes to the Regulations, held public information sessions for people to ask questions about the introduction of mandatory sheep and goat EID and put up significant amounts of information on the Agriculture Victoria website to assist producers, saleyards, stock agents and abattoirs understand the new system and ensure the transition is as seamless as possible.

Consultation with stakeholders consisted of:

- 56 face to face meetings
- 46 written submission received and considered
- participation of over 400 key stakeholders
- 170 comments on the specific requirements contained in the proposed Regulations received and considered
- 22 specific recommendations with around 70 per cent of those recommendations accepted.

7.5 Compliance and enforcement

7.5.1 Compliance approach

Compliance philosophy

Biosecurity outcomes are best achieved in collaboration with industry and community. While the legislative requirements, issues and stakeholders of specific program areas require tailored approaches, DEDJTR, through Biosecurity and Agriculture Services and Biosecurity Operations (ASBO), adopts a risk-based approach to identifying compliance priorities and determining appropriate responses.

Compliance activities aim to use the lowest level of intervention required to achieve the desired regulatory outcomes, while minimising impacts on market access, the community, environment and social amenity.

Within this approach, DEDJTR will:

- encourage shared responsibility for the management of biosecurity matters in Victoria by working closely with stakeholder groups and supporting stakeholders to act on their responsibilities
- promote and support compliance through engagement, extension and awareness activities
- monitor compliance and identify opportunities for improvement
- adopt a risk-based approach to prioritising compliance resources and activities
- implement regulatory responses to non-compliance that are proportionate to the risk posed and degree of non-compliance
- ensure transparency, consistency, equity and fairness in its compliance responses.

Compliance tools¹⁹⁷

Education is the primary response to inadvertent non-compliance which seeks to provide information to producers to assist their compliance and minimise risk. The approach escalates to include tools such as infringement notices, notices to comply etc. for opportunistic non-compliance. Opportunistic non-compliance is detected through surveillance (both active, for example targeted audits, investigations, benchmarking, and passive, for example reports from the public, industry or government sources) and monitoring (for example of livestock movement databases, results from routine audits and monitoring of persons with court orders).

These activities also detect instances of serious non-compliance which are higher risk offences with significant consequences. Where serious non-compliance is detected participants will be subjected to prosecution and other tools, such as revocation of licences limiting the operation of a business, as appropriate. The latter approach is resource intense and indicates failure of earlier intervention methods or an inability or unwillingness of a person to comply.

7.5.2 Collaboration with industry

The approach seeks to promote voluntary compliance in the first instance, and does so by close collaboration with industry stakeholders and direct education of participants. Voluntary compliance is rewarded through reduced monitoring by regulators. For example,

¹⁹⁷ The specific compliance activities to be conducted following the enactment of the Regulations have yet to be finalised.

The majority of pig production is captured under the Australian Pork Limited's (APL) on-farm quality assurance (QA) program, which is audited by a third party annually, and has traceability modules as part of the QA program. APL currently regulates 85-90 per cent of the pig industry (mainly medium- and large-sized producers), and the remaining 10-15 per cent are small producers whose compliance with the current standards and any future regulations may not be high. DEDJTR is working with APL to attempt to engage with these participants and attempt to increase awareness and compliance.

DEDJTR also works with the Victorian Farmer's Federation and other industry bodies to ensure that awareness of the Regulations is high and to emphasise the shared role of government and industry to promote reduced incidence of livestock disease outbreaks. Industry bodies, as a representative group, have an even greater incentive than producers to ensure that traceability is high and any outbreaks are caught quickly.¹⁹⁸

There is a graduating range of compliance and enforcement tools, activities and sanctions available to DEDJTR.

Compliance Measure	Description
Engagement and advice	DEDJTR will respond to direct requests for advice from members of the public and stakeholder groups. DEDJTR will proactively engage with specific members of the public and stakeholder groups as appropriate, to ensure that they are aware of their compliance obligations and understand the best practice ways of meeting those obligations.
Guidance materials	Guidance materials such as information notes are made available and easily accessible on the DEDJTR or regulators' websites. Guidance material shall provide advice on best practice and also outline compliance obligations for regulated parties and the public.
Education campaigns	Where deemed appropriate, DEDJTR will advertise to inform regulated parties and the public about compliance obligations in order to persuade them to comply and raise awareness. The campaigns should explain the reasons why regulations are in place or the negative impacts of non-compliance.
Permissioning systems	Means a system where the start or continuation of particular activities are conditional upon a consent, license, or acceptance via accreditation, of a safety management system or the adoption of standards.
Inspections and audits	DEDJTR will obtain information from regulated parties for regulatory compliance purposes through regular, random or targeted inspections or audits. Inspections will determine if the regulated party is complying with their compliance obligations and if not, a further intervention can be applied. Audits are generally used to monitor the regulated party's adherence to the permission conditions or standards and may provide the health and safety regulator with extended scope for inspection and sanction.
Control and compliance notices	DEDJTR will serve control or compliance notices, which will require one or more regulated parties to take or cease to do specified actions. The notices must be complied with, within a specified time frame or a penalty may be incurred.
Warning letters	DEDJTR will issue warning letters or official warnings where noncompliance is detected however it is determined that both the severity of the offence and the culpability of the offender is low and that an infringement or prosecution is not warranted.
Infringement notices	Where appropriate and available, DEDJTR will issue an infringement notice for a breach of a regulatory requirement. The person who receives an infringement notice must either pay it or elect to challenge it in court.
Permit revocations	Where a person holds a permit in relation to undertake regulated activities and they fail to meet the terms and conditions of that permit, DEDJTR may impose a penalty and/or revoke the permit.
Criminal prosecutions Enforceable undertakings	Where deemed appropriate, DEDJTR may bring criminal prosecutions against a regulated party, whether person or corporation, where it is alleged that they have breached a regulatory requirement, where there is a reasonable prospect of conviction and if it is in the public interest. A range of sentences and ancillary orders (such as prohibition orders) can be

¹⁹⁸ Information provided by DEDJTR.

made against a person found guilty of a criminal offence. This is at the Court's discretion.
Enforceable undertakings, where available as an alternative to prosecution, may be allowed in appropriate circumstances.

7.5.3 Compliance in relation to EID introduction for sheep and goats

In relation to the introduction of requirements for EID for sheep and goats, DEDJTR will undertake the following key activities.

Collaboration with stakeholders

DEDJTR, through Biosecurity and ASBO, will liaise closely with sheep and goat industry stakeholders in the planning, design and installation of infrastructure for the scanning of electronic NLIS tags at saleyards and processing establishments. DEDJTR will report on compliance performance to the Sheep and Goat Identification Advisory Committee.

Enforcement

Consistent with the Animal Health and Welfare (AH&W) Compliance Strategy (2016-2019), a decision must be made on appropriate enforcement action that is proportionate to the risk and impact by the non-compliance. The AH&W Compliance Strategy provides a decision-making framework regarding the use of enforcement action.

Initially, compliance measures will focus on engagement and advice and the provision of guidance materials and targeted education campaigns. As time progresses, appropriate enforcement action will be increased proportionate to the risk and impact by the non-compliance, taking into account any previous history of non-compliance.

Compliance monitoring

DEDJTR, through ASBO, is responsible for enforcement of the Act and Regulations. Biosecurity and ASBO and AH&W staff appointed as Inspectors under the Act will monitor compliance with the Regulations (and standards) and undertake enforcement activities in line with the Biosecurity and AH&W Compliance Strategy (2016-2019).

They will conduct monitoring operations at saleyards and abattoirs around Victoria monitoring for compliance with the new regulations. Specifically, monitoring will determine whether required sheep and goats have EID ear tags and whether the sheep and goats are being scanned and their information being uploaded onto the NLIS system.

ASBO personnel are responsible for the development of NLIS Auditing Standard Operating Procedures (SOP) for the auditing of saleyards and processors. The SOPs must reflect the requirements as per the Electronic NLIS (Sheep and Goats) Standards and associated Regulations. The NLIS will be running traceability exercises under the new EID system and Victoria will be alerted to instances of non-compliance.

Recording and reporting

DEDJTR, through Biosecurity and ASBO, will record results of inspection and auditing activities to enable benchmarking and the monitoring for improvements to livestock traceability by monitoring trends in compliance with the standards and any future national traceability exercises.

Awareness and extension campaign

Biosecurity and ASBO have engaged with industry stakeholders throughout the supply chain to create awareness of the implementation of the electronic NLIS (Sheep and Goats) and stakeholder responsibilities to meet the legislative obligations.¹⁹⁹

7.6 Evaluation strategy

An evaluation strategy is key to DEDJTR's goal of having robust processes to facilitate appropriate performance measurement. DEDJTR has allocated \$250,000 for evaluation-related activities over six years. Annual evaluation will be undertaken internally, in the form of internal progress status reports against Key Evaluation Questions (KEQs) (below). External evaluation is to be conducted for the mid-term and final evaluation reports. The findings of the evaluation will be reported formally to a project control board through a mid-term and final evaluation report. In addition, annual project status reports against the KEQs will also be prepared.

DEDJTR has also developed the Biosecurity Evidence Framework (BEF), which aims to collect evidence to assess that key biosecurity objectives are being met. This includes KEQs to evaluate the key objectives of the biosecurity program for animals. KEQs have been designed to gather evidence to assess the effectiveness and compliance with the legislative requirements under the Act and the existing Regulations.

The roll out of EID for sheep and goats, will result in the framework being amended to account for this significant change to livestock identification requirements including assessing the effectiveness of compliance with the new Regulations.

Apart from evaluating the effectiveness of the proposed Regulations that principally support traceability of livestock, the entire program for implementation of EID for sheep and goats will also be subject to a detailed evaluation program to gather evidence to inform DEDJTR of the program's success and to identify problems and to apply any learnings to future biosecurity programs.

Evidence will be gathered under the following KEQs provided below.

The KEQs will be used by DEDJTR to guide evaluation of the sheep and goats EID roll-out:

1. To what extent was the project well planned and implemented? (process)
 - I. To what extent was the project implemented as planned (i.e. in terms of deliverables, budget, timelines) (fidelity)
 - II. To what extent was the grants program well planned and delivered? (process)
 - III. To what extent did the project governance arrangements facilitate achievement of the desired outcomes? (process)
2. To what extent has stakeholder adoption of sheep EID been effective?
 - I. To what extent did stakeholders comply with legislation requirements?
 - II. How satisfied were stakeholders with implementation and use of the Sheep EID system (e.g. installation of infrastructure across the supply chain) (effectiveness)
3. To what extent has the project facilitated economic benefits (including commercial benefits) to Victoria through the implementation of Sheep EID?
4. To what extent has the Victorian system met national standards and enhanced livestock traceability in terms of timeliness and accuracy of data? (outcome)
5. What, if any, unintended outcomes (positive and negative) were achieved by the project? (outcome)

¹⁹⁹ Information provided by DEDJTR.

6. What aspects of the project worked well/did not work well and why? What key lessons have been learned that could inform decision making?

It is intended to use the evidence gathered under the BEF and ongoing consultation with key industry representatives, the Commonwealth, states and territories to assess if any further amendments are required following the making of these proposed Regulations. Reasons for any future amendments may be attributed to advancements in technology in the identification of livestock and disease control, changes in industry practices, local and international market access requirements and state and national biosecurity policy.

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Appendix A Summary of consultation

Consultation was conducted over 2016 to gather the views of key industry stakeholders and fill data gaps. DEDJTR provided a list of key industry stakeholders and also made themselves available. Consultation was conducted by PwC primarily through face-to-face meetings or teleconferences. Information and data resulting from consultation was captured, and below is a summary of the results from consultation.

1 Sheep and goats

The views on the optimum approach to tracing sheep and goats in Victoria varied among consultation participants. While the majority were in support of EID tagging, there were opposing views that the current system could be made to work with additional enforcement efforts and better education.

The primary concern in relation to EID was the cost it would impose on producers (in relation to the cost of EID tags) and saleyards (in relation to scanning equipment or the cost of hiring such equipment).

The majority however believed that the introduction of EID would be beneficial, as it would provide more timely and accurate traceability, and hence allow for more effective response in the instance of a disease outbreak. This would better ensure that the scale of the outbreak is minimised and the targeted action can be used effectively to prevent it from further spreading.

Another issue identified through consultation was the implementation of the new requirements. It was the view by some that the 'devil was in the detail' and that the practical implications of implementation of equipment on the ground should be worked through prior to introducing the requirement.

Consultation participants were also able to provide information that informed the cost benefit analysis undertaken for this RIS.

2 Cattle

All consultation participants were satisfied with the operation of cattle EID tagging provisions. No suggestions were provided to change cattle traceability in Victoria.

3 Pigs

Some consultation participants raised concerns that there was a disproportionate amount of effort concentrated on sheep and goats, at the cost of efforts spent on the better traceability and regulation of pigs.

The common view amongst those consulted was that pigs are commonly the initial source of the problem and that further efforts should be afforded to identifying pig farms in Victoria, as well as increasing compliance with the NLIS Pig Traceability Standards to ensure that DEDJTR can quickly track diseased pigs (as pigs are often the originator of FMD).

It was confirmed during consultation that the vast majority of large industry producers already comply with the requirements of the NLIS Pig Traceability Standards, and that it was assumed by some industry producers that smaller operations may not. Industry were also aware of the limited information available in relation to those smaller industry producers and the difficulty in being able to enforce any requirements on them in the current environment.

4 Consultation participants

Organisation/affiliation
Australian Livestock and Property Agents Association (ALPA)
Australian Pork Limited (APL)
DairySafe
Livestock and Rural Transporters Association Victoria (LRTAV)
Livestock Saleyards Association of Victoria (LSAV)
National Saleyards Quality Assurance (NSQA)
PrimeSafe
Victorian Farmers Federation (VFF)

Appendix B Draft Regulations

Version No. 001
Livestock Disease Control Regulations 2017
S.R. No. xx/2017

TABLE OF PROVISIONS

Regulation

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Version No. 001
Livestock Disease Control Regulations 2017
S.R. No. xx/2017

The Governor in Council makes the following Regulations:

Dated:

Responsible Minister

JAALA PULFORD

Minister for Agriculture

Clerk of the Executive Council

Part 1—Preliminary

1 Objectives

The objectives of these Regulations are—

- (a) to provide for the timing and manner of the notification of livestock diseases; and
- (b) to provide for the manner in which certain livestock are identified; and
- (c) to provide for the manner of certification of, and restrictions relating to, livestock, livestock products, fodder or fittings introduced into Victoria; and
- (d) to set out the standards and record keeping requirements relating to the testing for livestock diseases; and
- (e) to set out requirements for the prevention of livestock diseases; and

- (f) to provide for the recording or forwarding of information relating to the movement of identified livestock; and
- (g) to provide for matters relating to claims for compensation for losses incurred due to livestock disease; and
- (h) to provide for other matters required to be prescribed under the **Livestock Disease Control Act 1994**.

2 Authorising provision

These Regulations are made under section 139 of the **Livestock Disease Control Act 1994**.

3 Commencement

- (1) These Regulations (except regulation 39) come into operation on 1 July 2017.
- (2) Regulation 39 comes into operation on 31 December 2017.

4 Revocation

The Regulations listed in Schedule 1 are **revoked**.

5 Definitions

In these Regulations—

ANZSDP means the Australian and New Zealand Standard diagnostic procedures for use in Australian veterinary laboratories, published by the Commonwealth Department of Agriculture and Water Resources as published or amended from time to time;

abattoir has the same meaning as it has in the **Meat Industry Act 1993**;

animal identifier means a number, code or other marker that has been applied to an animal or in respect of an animal for the purpose of identifying that animal;

approved NLIS device means an NLIS device approved by the Secretary under section 9A(1)(c) of the Act ;

approved NLIS ear tag means an NLIS ear tag approved by the Secretary under section 9A(1)(c) of the Act;

ASDT means the Australian standard diagnostic techniques published by the Commonwealth Department of Agriculture and Water Resources as published or amended from time to time;

AS ISO/IEC 17025-1999 means the Australian Standard ASISO/IEC 17025-1999, “General requirements for the competence of testing and calibration laboratories”, as published or amended from time to time;

authorised officer means a person appointed under a law of another State or Territory of the Commonwealth corresponding with the Act to inspect livestock, livestock products, fodder or fittings;

bovine malignant tumour of the eye larger than 2 cm means a squamous cell carcinoma of the ocular, periocular, or both tissues of a size greater than 2 centimetres in any plane, including conditions commonly known as cancer eye or bovine malignant tumour of the eye;

Chief Veterinary Officer means the Chief Veterinary Officer of the Department of Economic Development, Jobs, Transport and Resources

commercial flock of poultry means a group of more than 1,000 chickens

corresponding law means—

Livestock Disease Control Regulations 2017
S.R. No. xx/2017

- (a) other than for the purposes of regulation 105(e), the following Acts—
- (i) Animal Diseases and Animal Pests (Emergency Outbreaks) Act 1991 of New South Wales;
 - (ii) Apiaries Act 1985 of New South Wales;
 - (iii) Biosecurity Act 2015 of New South Wales;
 - (iv) Stock Diseases Act 1923 of New South Wales;
 - (v) Livestock Act 1997 of South Australia;
 - (vi) Biosecurity Act 2014 of Queensland;
 - (vii) Animal (Brands and Movement) Act 1984 of Tasmania;
 - (viii) Animal Health Act 1995 of Tasmania;
 - (ix) Biosecurity and Agriculture Management Act 2007 of Western Australia;
 - (x) Exotic Diseases of Animals Act 1993 of Western Australia;
 - (xi) Livestock Act of the Northern Territory;
 - (xii) Animal Diseases Act 2005 of the Australian Capital Territory;
 - (xiii) Stock Act 2005 of the Australian Capital Territory;
- (b) for the purposes of regulation 105(e) the following Acts—
- (i) Australian Meat and Live-stock Industry Act 1997 of the Commonwealth;

- (ii) Meat Industry Act 1978 of New South Wales;
- (iii) Food Production (Safety) Act 2000 of Queensland;
- (iv) Primary Produce (Food Safety Schemes) Act 2004 of South Australia;
- (v) Western Australian Meat Industry Authority Act 1976 of Western Australia;
- (vi) Primary Produce Safety Act 2011 of Tasmania;
- (vii) Meat Industries Act of the Northern Territory.

Emergency means an emergency that poses an imminent danger to livestock but does not include an outbreak of disease;

government apiary officer means a person appointed, under a law of another State or Territory of the Commonwealth corresponding with the Act, to inspect bees, bee products, fodder or beekeeping fittings;

knackery has the same meaning as it has in the **Meat Industry Act 1993**;

National Livestock Identification System means the system in Australia for identifying and tracking livestock for disease control, food safety and market access purposes;

Newcastle Disease Management Plan means the Australian Animal Health Council Ltd. “National Newcastle Disease Management Plan 2013-16 Version 1.7”, as published or amended from time to time;

NLIS means the National Livestock Identification System;

NLIS device means a device for the permanent identification of livestock that—

- (a) contains a microchip, which records information that can be retrieved electronically; and
- (b) is capable of being permanently attached to or implanted in livestock; and
- (c) is made by a manufacturer under a licence granted by NLIS Limited (ABN 39 081 678 364); and
- (d) in the case of a rumen bolus is accompanied by NLIS ear tag in the form of Part D of Schedule 3.

NLIS ear tag means an ear tag for the permanent identification of sheep or goats that—

- (a) records information that can be read visually; and
- (b) is capable of being permanently attached to sheep or goats; and
- (c) is made by a manufacturer under a licence granted by Meat and Livestock Australia Limited (ABN 39 081 678 364);

poultry means any of the following livestock reared in captivity—

- (a) a chicken;
- (b) a turkey;
- (c) a guinea fowl;
- (d) a duck;
- (e) a goose;
- (f) a quail;
- (g) a pigeon;
- (h) a pheasant;

- (i) a partridge;
- (j) an emu;
- (k) an ostrich;

registered beekeeper means a person registered as a beekeeper within the meaning of Division 5 of Part 4 of the Act;

rumen bolus means a capsule that may be inserted into cattle which after application is intended to rest in the reticulum for the life of the animal and which contains an electronic transponder that can be read electronically;

the Act means the **Livestock Disease Control Act 1994**;

veterinary practitioner means a veterinary practitioner registered under the **Veterinary Practice Act 1997**.

Part 2— Notification of Livestock Diseases

6 Notification of diseases

- (1) For the purposes of section 7(3) of the Act, the following is the prescribed time—
 - (a) for a disease listed in Part A of Schedule 2, without delay;
 - (b) for a disease listed in Part B of Schedule 2, within 12 hours;
 - (c) for a disease listed in Part C of Schedule 2, within 7 days;
 - (d) for any disease not listed in Schedule 2 (other than an exotic disease), within 12 hours.
- (2) For the purposes of section 7(3) of the Act, the following is the prescribed manner—
 - (a) in the case of a notice provided in accordance with subregulation (1)(a) that the notice is provided by the fastest means of communication available at the time;
 - (b) for any notice provided in accordance with subregulation (1) that it contains information in respect of—
 - (i) the species of the livestock or the species of livestock from which the livestock product was derived; and
 - (ii) the property identification code identifying the property at which the livestock is kept (if known); and
 - (iii) the disease suspected to be present; and

- (iv) the number and type of livestock on the property; and
- (v) the species and number of live animals that are affected and the species and number of live animals that are not affected; and
- (vi) the number of dead animals; and
- (vii) a description of the signs of the disease; and
- (viii) whether or not a veterinary practitioner has been consulted for the purposes of determining if the livestock, livestock product or hive is infected with any disease; and
- (ix) any veterinary practitioner who has been consulted in accordance with paragraph (viii), the name and contact details of the veterinary practitioner; and
- (x) the address or description of the location at which the livestock, livestock product or hives were observed; and
- (xi) the date of onset of signs of the disease; and
- (xii) the age of any livestock suspected to be affected by the disease; and
- (xiii) whether or not any specimens have been submitted to a laboratory for the purpose of determining if the livestock, livestock product or hive is infected with any disease; and
- (xiv) the name and address of the laboratory to which any specimen has been sent; and

(xv) the name and address of the owner of the affected livestock, livestock product or hive (if known); and

(xvi) the name, address and telephone number of the person providing the notice; and

(xvii) the date of the notice.

7 Notification of unusual circumstances of disease or death in livestock

For the purposes of section 7B of the Act, the following is the prescribed manner—

- (a) that the notification is provided in writing;
- (b) that the notification contains information in respect of—
 - (i) the species of the livestock or the species of livestock from which the livestock product was derived; and
 - (ii) the property identification code identifying the property at which the livestock is kept (if known); and
 - (iii) the disease suspected to be present; and
 - (iv) the species and number of live animals that are affected and the species and number of live animals that are not affected; and
 - (v) the number of dead animals; and
 - (vi) a description of the signs of the disease; and
 - (vii) the date of onset of signs of the disease; and
 - (viii) the age of any livestock suspected to be affected by the disease; and

- (ix) whether or not a veterinary practitioner has been consulted for the purposes of determining whether the livestock, livestock product or hive is infected with any disease; and
- (x) any veterinary practitioner who has been consulted in accordance with paragraph (ix), the name and contact details of the veterinary practitioner; and
- (xi) the address or description of the location at the which the livestock, livestock product or hives were observed; and
- (xii) whether or not any specimens have been submitted to a laboratory for the purpose of determining if the livestock, livestock product or hive is infected with any disease;
- (xiii) the name and address of the laboratory to which any specimen has been sent; and
- (xiv) the name and address of the owner of the affected livestock, livestock product or hive (if known);
- (xv) the name, address and telephone number of the person providing the notice; and
- (xvi) the date of the notification.

Part 3—Requirements for vendor declarations when livestock are moved

8 Prescribed particulars to be included in vendor declaration by first owner

For the purposes of section 8A(2)(c)(vii) of the Act, the prescribed particulars are –

- (a) in the case of cattle, pigs, sheep and goats-
 - (i) the name of the owner of the livestock or the trading name of the owner of the livestock;
 - (ii) the physical address of the place from which the livestock are being moved;
 - (iii) the unique serial number on the form approved by the Secretary under section 8A(2)(b);
 - (iv) the property identification code of the property of destination or, if not known, the name of the owner of the property of destination and the address;
- (b) in the case of pigs, sheep and goats in addition to the matter referred to in paragraph (a)–
 - (i) whether the pigs, sheep or goats have been bred by the owner making the declaration and if not the period of time they resided on the property;
 - (ii) the number and description of the pigs, sheep or goats being moved;
- (c) in the case of pigs that are branded or tattooed in addition to the matter referred to in paragraph (a) and (b), the tattoo or brand number.

9 Prescribed period for which vendor declaration to be kept when ownership does not change

For the purposes of section 8A(4) of the Act, the prescribed period is—

- (a) in the case of cattle, 7 years; or
- (b) in the case of pigs, 2 years; or
- (c) in the case of sheep, 7 years; or
- (d) in the case of goats, 7 years; or
- (e) in the case of a vendor declaration kept by the NLIS, the period between the date the relevant livestock are moved and the giving of a vendor declaration to the NLIS.

10 Prescribed period within which livestock agent to give vendor declaration to new owner

For the purposes of section 8A(6) of the Act, the prescribed period is—

- (a) in the case of cattle –
 - (i) if the cattle are being moved from a saleyard to an abattoir whichever is the sooner of midnight on the day of sale or before the cattle are slaughtered at the abattoir;
 - (ii) in any other case, within 2 working days;
- (b) in the case of pigs, by the time of delivery;
- (c) in the case of sheep or goats—
 - (i) that are being moved from a saleyard to an abattoir, whichever is the sooner of midnight on the day of sale or before the sheep or goats are slaughtered at the abattoir;
 - (ii) in any other case, within 2 working days.

Penalty: 10 penalty units

11 Prescribed document and particulars for document relating to movement of livestock

For the purposes of section 8A(6)(b) of the Act, in the case of pigs, sheep and goats consigned to an abattoir—

- (a) a document that sets out the details of the sale of the pigs, sheep or goats is prescribed; and
- (b) the prescribed particulars are the following—
 - (i) in the case of pigs, sheep or goats that are sold through a saleyard operator, the property identification code of the saleyard operator;
 - (ii) the date of sale;
 - (iii) the number of pigs, sheep or goats in the lot;
 - (iv) the serial number on any vendor declaration form accompanying the pigs, sheep or goats;
 - (v) the property identification code identifying the property at which the pigs sheep or goats were kept before being dispatched;
 - (vi) the property identification code of the property to which the pigs, sheep or goats will be dispatched;
 - (vii) whether or not the pigs, sheep or goats are vendor bred and if not, the period of time that the first introduced non vendor bred animal resided on the property from which they were dispatched;
 - (viii) if the pigs, sheep or goats are not vendor bred and are not identified with an NLIS device, the property identification codes specified on the vendor declaration as property identification codes that are recorded on NLIS ear tags on pigs, sheep or

goats (not being the property identification code identifying the property from which the sheep or goats were dispatched;

- (ix) for every sheep or goat identified with an NLIS device the first 8 visually readable numbers on the NLIS device where it is not identifying the property from which the pigs, sheep or goats were dispatched.

12 Prescribed period to keep a vendor declaration by person giving a vendor declaration

For the purposes of section 8A(7) of the Act, the prescribed period is—

- (a) in the case of pigs, 2 years; or
- (b) in the case of sheep or goats—
 - (i) for a stock and station agent, 2 years; and
 - (ii) for any other person, 7 years;
- (c) in the case of cattle—
 - (i) for a stock and station agent, 2 years; and
 - (ii) for any other person, 7 years;
- (d) in the case of a document kept by the NLIS in respect of sheep or goats, the period between the date the vendor declaration or document was given to the person and the giving of the copy to the NLIS

13 Prescribed period for person to keep vendor declaration or document

For the purposes of section 8A(8) of the Act, the prescribed period is—

- (a) for a document given under section 8A(3) –
 - (i) in the case of pigs, 2 years; and
 - (ii) in the case of cattle, sheep or goats, 7 years;

- (b) for a document given under section 8A(6), other than to a saleyard operator, 2 years.

14 Prescribed livestock for the purposes of section 8A(9) of the Act

For the purposes of the definition of *livestock* in section 8A(9) of the Act, the prescribed livestock are cattle, pigs, sheep and goats.

Part 4—Requirements for movement information when livestock are slaughtered

15 Cattle, pigs, sheep and goats not to be slaughtered without movement documentation

An abattoir operator must not slaughter cattle, pigs, sheep or goats unless the abattoir operator has in the abattoir operator's possession, in relation to the ownership of the cattle, pigs, sheep or goats a vendor declaration or a document provided to the abattoir operator under section 8A of the Act.

Penalty: 5 penalty units.

Part 5—Identification of livestock

Division 1—Prescribed manner of identification for the purposes of section 9 of the Act

16 Prescribed livestock for the purposes of section 9

For the purposes of section 9 of the Act, the prescribed livestock are pigs, sheep and goats.

17 Prescribed manner of identification for cattle

- (1) For the purposes of section 9 of the Act in respect of cattle the prescribed manner is—

- (a) by means of an NLIS device that sets out the property identification code identifying the property at which the cattle were born and in the form of Part A of Schedule 3; or
- (b) by means of an NLIS device that is a rumen bolus that is accompanied by an NLIS ear tag in the form of Part D of Schedule 3 (*cattle breeder electronic tag*); or
- (c) in the case that the cattle has moved off the property of birth and is not identified by a cattle breeder electronic tag or the cattle breeder electronic tag is not functioning by means of an NLIS device that identifies the property at which the cattle was kept immediately before being dispatched, sold, transported, slaughtered or disposed of and which is in the form of Part B of Schedule 3 (*cattle post breeder electronic tag*); or
- (d) in the case of cattle that has moved off the property of birth and the cattle post breeder electronic tag is not functioning by means of an NLIS device that identifies the property at which the cattle were kept immediately before being dispatched, sold, transported, slaughtered or disposed of and which is in the form of Part B of Schedule 3; or
- (e) in the case of cattle that has moved off the property of birth and is subsequently moved off any other property and is unidentified, by means of a cattle post breeder electronic tag that is functioning ; or
- (f) in the case that the cattle are less than 6 weeks of age and are consigned directly to a knackery for disposal by means of—
 - (i) an approved NLIS device; or
 - (ii) an ear tag that identifies the property from which the cattle were dispatched.

- (2) A saleyard operator, selling agent or cattle scale operator that reasonably believes that cattle has not been identified in accordance with section 9 of the Act must make and keep for a period of 2 years a record of the use of a post breeder electronic tag to identify cattle that includes the following information—
- (a) the relevant animal identifier;
 - (b) the date of use of the post breeder electronic tag;
 - (c) the name of the person who attached the post breeder electronic tag to the cattle;
 - (d) the property identification code of the property from which the cattle originated;
 - (e) the total number of livestock in the consignment of which the cattle are a part.

Penalty: 10 penalty units.

18 Unidentified cattle—unsafe circumstances

Regulation 17 does not apply in the circumstance of the dispatch of cattle that has not been identified by an owner who—

- (a) reasonably believes it is unsafe to identify the cattle in the manner prescribed under regulation 17; and
- (b) has been issued a permit by an inspector authorising the dispatch of the cattle without being identified in the manner prescribed under regulation 17; and
- (c) complies with any term or condition of the permit referred to in paragraph (b).

19 Unidentified cattle—emergency circumstances

Regulation 17 does not apply in the circumstances of the dispatch by an owner during the course of an emergency of cattle that has not been identified if the owner—

- (a) notifies an inspector of the dispatch of the cattle within 7 days of the date that the dispatch occurred; and
- (b) gives the following information to the Secretary in the manner specified by the Secretary—
 - (i) the property identification code of the property from which the cattle were dispatched; and
 - (ii) the date of dispatch of the cattle; and
 - (iii) the number and description of the cattle received at the destination property; and
 - (iv) the property identification number of the property of destination; and
 - (v) the name and address of the consignee (if known).

20 Prescribed manner of identification for pigs

For the purposes of section 9 of the Act in respect of a pig the prescribed manner is—

- (a) by means of a tattoo or ear tag that sets out the brand issued to the owner of the pig by the Secretary, from which can be ascertained, the property identification code identifying the property at which the pig was kept immediately before being dispatched, sold, transported, slaughtered or disposed of; and
- (b) in the case that the pig is less than 25 kilograms in weight, an ear tag that must be in the form of Part E of Schedule 3; and

- (c) in the case that the pig is more than 25 kilograms in weight, a tattoo that must be in the form of Part F of Schedule 3.

21 Unidentified pig—unsafe circumstances

Regulation 20 does not apply in the circumstance of the dispatch of a pig that has not been identified by an owner who—

- (d) reasonably believes it is unsafe to identify the pig in the manner prescribed under regulation 20; and
- (e) has been issued a permit by an inspector authorising the dispatch of the pig without being identified in the manner prescribed under regulation 20; and
- (f) complies with any term or condition of the permit referred to in paragraph (b).

22 Unidentified pig—emergency circumstances

Regulation 20 does not apply in the circumstance of the dispatch by an owner during the course of an emergency of a pig that has not been identified if the owner—

- (a) notifies an inspector of the dispatch of the pig within 7 days of the date that the dispatch occurred; and
- (b) gives the following information to the Secretary in the manner specified by the Secretary—
 - (i) the property identification code of the property from which the pig was dispatched; and
 - (ii) the date of dispatch of the pig; and
 - (iii) the number of pigs received at the destination property; and

- (iv) the property identification number of the property of destination; and
- (v) the name and address of the consignee (if known).

23 Prescribed manner of identification for sheep and goats

- (1) For the purposes of section 9 of the Act, in respect of sheep and goats born before 1 January 2017 the prescribed manner is—
 - (a) the manner of identification under regulation 24; or
 - (b) in the case that a sheep or goat is not identified in accordance with paragraph (a) by means of an NLIS ear tag in the form of Part G of Schedule 3 that sets out the property identification code identifying the property at which the sheep or goat was born (*sheep and goat breeder tag*); and
 - (c) in the case that a sheep or goat is not identified in accordance with paragraph (b) and has moved off the property of birth—
 - (i) by means of an NLIS ear tag in the form of Part H of Schedule 3 that identifies the property at which the sheep or goat was kept immediately before being dispatched, sold, transported, slaughtered or disposed of (*sheep and goat post-breeder tag*); or
 - (ii) by means of recording the property identification code from the sheep and goat breeder tag and any sheep and goat post-breeder tag present

on the sheep or goat onto the vendor declaration.

- (2) A saleyard operator or selling agent that reasonably believes that a sheep or goat has not been identified in accordance with section 9 of the Act must make and keep for a period of 2 years a record of the use of a sheep and goat post-breeder tag to identify the sheep or goat that includes the following information—
- (f) the relevant animal identifier;
 - (g) the date of use of the sheep and goat post-breeder tag;
 - (h) the name of the person who attached the sheep and goat post-breeder tag to the sheep or goat;
 - (i) the property identification code of the property from which the sheep or goat originated;
 - (j) the total number of livestock in the consignment of which the sheep or goat are a part.

Penalty: 10 penalty units.

24 Prescribed manner of identification for sheep and goats born on or after 1 January 2017

- (1) For the purposes of section 9 of the Act, in respect of a sheep or a goat born on or after 1 January 2017 the prescribed manner is—
- (a) by means of an NLIS device that sets out the property identification code identifying the property at which the sheep or goat was born in the form of Part I of Schedule 3 (*breeder electronic tag*); or
 - (b) in the case that a sheep or goat has moved off the property of birth and is

- not identified with a breeder electronic tag or the breeder electronic tag is not functioning, by means of an NLIS device that identifies the property at which the sheep or goat was kept immediately before being dispatched, sold, transported, slaughtered or disposed of in the form of Part J of Schedule 3 (*post breeder electronic tag*); or
- (c) in the case that a sheep or goat has moved off the property of birth and the post breeder electronic tag is not functioning, by means of an NLIS device that identifies the property at which the sheep or goat was kept immediately before being dispatched, sold, transported, slaughtered or disposed of in the form of Part J of Schedule 3; or
- (d) in the case that a sheep or goat has moved off the property of birth and is subsequently moved off any other property and is unidentified, by means of a post breeder electronic tag that is functioning.
- (2) A saleyard operator or selling agent that reasonably believes that a sheep or goat has not been identified in accordance with section 9 of the Act must make and keep for a period of 2 years a record of the use of a sheep and goat post-breeder electronic tag to identify sheep and goats that includes the following information—
- (a) the relevant animal identifier;
- (b) the date of use of the sheep and goat post-breeder electronic tag;

- (c) the name of the person who attached the sheep and goat post-breeder electronic tag to the sheep or goat;
- (d) the property identification code of the property from which the sheep or goat originated;
- (e) the total number of livestock in the consignment of which the sheep or goat are a part.

Penalty: 10 penalty units.

25 Unidentified sheep or goats—unsafe circumstances

Regulation 23 or 24 do not apply in the circumstance of the dispatch of a sheep or a goat that has not been identified by an owner who—

- (a) reasonably believes it is unsafe to identify the sheep or the goat in the manner prescribed under regulation 23 or 24; and
- (b) has been issued a permit by an inspector authorising the dispatch of the sheep or the goat without being identified in the manner prescribed under regulation 23 ad 24; and
- (c) complies with any term or condition of the permit referred to in paragraph (b).

26 Unidentified sheep or goats—emergency circumstances

Regulation 23 and 24 do not apply in the circumstances of the dispatch by an owner during the course of an emergency, of a sheep or a goat that has not been identified if the owner—

- (a) makes a record within 14 days of the date of the dispatch that contains the information under paragraph (b), and provides that record to the Secretary in the manner specified by the Secretary; and
- (b) a record referred to in paragraph (a) must include the following information—
 - (i) the property identification code of the property from which the sheep or the goat was dispatched; and
 - (ii) the date of dispatch of the sheep or the goat; and
 - (iii) the number of sheep or goats received at the destination property; and
 - (iv) the unique serial number on any vendor declaration.

27 Prescribed manner for identification of cattle directly dispatched from place of purchase

For the purposes of section 9 of the Act in respect of any cattle that is dispatched directly from the place at which it was purchased for sale at a saleyard, slaughter at an abattoir or disposal at a knackery, the prescribed manner is the NLIS device ear tag attached to the cattle at the time of purchase.

28 Prescribed manner for identification of pigs directly dispatched from place of purchase

For the purposes of section 9 of the Act in respect of a pig that is dispatched directly from the place at which it was purchased for sale at a saleyard,

slaughter at an abattoir or disposal at a knackery, the prescribed manner is the ear tag or tattoo borne by the pig at the time of purchase.

29 Prescribed manner for identification of sheep and goats directly dispatched from place of purchase

For the purposes of section 9 of the Act in respect of a sheep or goat that is dispatched directly from the place at which it was purchased for sale at a saleyard, slaughter at an abattoir or disposal at a knackery, the prescribed manner is the NLIS ear tag or NLIS device borne by the sheep or goat at the time of purchase.

30 Prescribed manner for identification of pigs sold privately

For the purposes of section 9 of the Act in respect of a pig that is sold privately between persons and is to remain on the purchaser's property for 30 days or more, and is not identified in accordance with regulation 20 the prescribed manner is that the pig must be accompanied by a document that—

- (a) identifies the pig by breed, sex and age; and
- (b) contains the property identification code identifying the property from which the pig was dispatched for sale or the brand issued to the owner of the pig by the Secretary from which that property identification code can be ascertained.

31 Non-functioning tag may be removed

(1) For the purposes of section 9A(2)(c) of the Act—

- (a) an NLIS device may be removed if the device cannot be read with a reader; and

(b) an NLIS ear tag may be removed if the identifying numbers cannot be visually read.

- (2) In this regulation *reader* means an instrument—
- (a) that is used to scan an NLIS device; and
 - (b) the instrument is capable of detecting and decoding the number encoded on the transponder in an NLIS device.

32 Removal or disposal of NLIS ear tag or NLIS device

- (1) A person who removes an NLIS ear tag or NLIS device from cattle must dispose of the NLIS ear tag or NLIS device in a manner that prevents its re-use.

Penalty: 5 penalty units

- (2) A saleyard operator, selling agent or cattle scale operator who removes an NLIS ear tag or NLIS device from cattle, sheep or goats must ensure that the information printed on the NLIS ear tag or electronically recorded on the NLIS device is provided to the Secretary or the administrator of NLIS immediately following that removal in the manner required by the Secretary.

Penalty: 5 penalty units

33 NLIS device not to be re-used without authority

A person must not without the approval of the Secretary use for the identification of livestock, an NLIS device that has previously been used to identify livestock.

Penalty: 5 penalty units.

34 Prescribed manner of identification for cattle or pigs to be slaughtered or disposed of at a knackery

For the purposes of section 9 of the Act, in the case of any cattle or pig that is to be slaughtered at an

abattoir or disposed of at a knackery and the cattle or pig is not identified in the manner set out in regulation 17, 20 35 or 36 the prescribed manner of identification is that the operator of the abattoir or knackery—

- (a) before the slaughter or disposal of the cattle or pig determine the property at which the cattle or pig was last kept or the lot or pen number at the relevant sale yard from which the cattle or pig was collected; and
- (b) keep a record of the information determined under paragraph (a) for 2 years.

35 Pigs less than 25 kg may be identified with temporary tags

- (1) For the purposes of section 9 of the Act, in the case of any pig that has no ear tag, is less than 25 kilograms and that is to be sold in a saleyard or scale operation or slaughtered or disposed of at an abattoir or a knackery the prescribed manner of identification is that—
 - (a) the selling agent ensure that a temporary ear tag in the form of Part K of Schedule 3 be attached to the pig; and
 - (b) the following details are recorded against the tag number by the selling agent or inspector who supplied the ear tag—
 - (i) the name and address of the person selling the pig;
 - (ii) the property identification code (if issued) or the brand identifying the property from which the pig was dispatched.
- (2) A selling agent must keep details recorded in accordance with subregulation (1)(b) for 2 years.

Penalty: 5 penalty units.

36 Pigs may be identified with temporary tattoos

- (1) For the purposes of section 9 of the Act for in the case of a pig that is 25 kilograms or more and that has no identifying tattoo and is to be sold in a saleyard or scale operation or slaughtered or disposed of at an abattoir or a knackery the prescribed manner of identification is that—
 - (a) the selling agent ensure that a temporary tattoo in accordance with Part L of Schedule 3 be applied to the pig; and
 - (b) the following details are recorded against the tattoo brand by the selling agent or inspector who supplied the tattoo brand—
 - (i) the name and address of the person selling the pig; and
 - (ii) the property identification code (if issued) or other details identifying the property from which the pig was dispatched.
- (2) A selling agent must keep details recorded in accordance with subregulation (1)(b) for 2 years.

Penalty: 5 penalty units.

37 Cattle may be identified with temporary tags

- (1) For the purposes of section 9 of the Act, in the case of cattle that does not have an NLIS device and the selling agent or scale operator reasonably believes it is unsafe to attach an NLIS device and the cattle is to be sold in a saleyard or scale operation or slaughtered or disposed of at an abattoir or a knackery the prescribed manner of identification is—
 - (a) a temporary tail tag in the form of Part C of Schedule 3 attached to the cattle, before the

cattle leave the saleyard or scale operation;
and

- (b) that the selling agent or the scale operator who attaches a temporary tail tag under paragraph (a) records the following information against the tag number by the close of business on the day the tag was attached—
- (i) the name and address of the person selling the cattle; and
 - (ii) the property identification code (if issued) identifying the property from which the cattle was dispatched;
 - (iii) the number on each temporary tail tag attached to the cattle and the date it was attached;
 - (iv) the unique number on the vendor declaration accompanying the cattle.

(2) A selling agent or scale operator must keep information recorded in accordance with subregulation (1)(b) for 2 years.

(3) The selling agent or the scale operator who records information under paragraph (b) must provide as soon as practicable that information to the Secretary in the manner specified by the Secretary.

Penalty: 5 penalty units.

38 Requirement at saleyards to scan sheep and goats and record identification information

The selling agent at a saleyard in the case of a sheep or goat identified with an NLIS device must —

- (a) scan the NLIS device to retrieve the encoded device number and record that information; and
- (b) keep a record of the information under paragraph (a) for 1 year.

Penalty: 5 penalty units.

39 Requirement on operators of a knackery or abattoir scan sheep and goats and record identified sheep and goats

An operator of a knackery or abattoir that takes possession of a sheep or a goat must in the case of a sheep or a goat identified with an NLIS device, scan the NLIS device to retrieve the encoded device number and forward that number to the Secretary in the manner specified by the Secretary.

Penalty: 5 penalty units.

Division 2—Identification of livestock brought into Victoria

40 Identification of livestock brought into Victoria

- (1) For the purposes of section 10(2)(a) of the Act the prescribed requirements are that a person who brings into Victoria any cattle, pig, sheep or goat from another State or a Territory of the Commonwealth are—
 - (a) in the case of cattle, the cattle must be identified by means of an NLIS device that identifies cattle in accordance with any laws relating to identification of livestock of the State or Territory from which the cattle was dispatched; and

- (b) in the case of a pig, the pig must be identified by a tattoo or ear tag that contains the brand that identifies the property from which the pig was dispatched in accordance with any laws relating to identification of livestock of the State or Territory from which the pig was dispatched; and
 - (c) in the case of a sheep or goat, the sheep or goat must be identified by means of an NLIS device or an NLIS ear tag that identifies the sheep or the goat in accordance with any laws relating to identification of livestock of the State or Territory from which the sheep or goat was dispatched; and
 - (d) that the consignment is accompanied by a completed and accurate vendor declaration.
- (2) For the purposes of section 10(2)(a) of the Act a person may introduce cattle, pigs, sheep or goats into Victoria in accordance with any requirement determined by the Secretary.

Division 3—Permanent identification of livestock

41 Prescribed classes of livestock to be permanently identified

For the purposes of section 9A of the Act the prescribed classes of livestock are pigs, sheep and goats.

42 Prescribed circumstances for permanent identification of prescribed classes of livestock

- (1) For the purposes of section 9A(1)(b) of the Act the prescribed circumstances, in the case of cattle, are—
 - (a) before the cattle are dispatched from the property at which they are being kept—
 - (i) to another property for grazing; feeding or exhibition if the other property has a different property identification code; or
 - (ii) to another property after private sale of the cattle; or
 - (iii) to another property in any other circumstances other than those set out in section 9(a) of the Act; and
 - (b) in the case of cattle not permanently identified in accordance with section 9A that are introduced to a property before being dispatched from the property to which the cattle were introduced.
- (2) For the purposes of section 9A(1)(b) of the Act the prescribed circumstances, in the case of sheep or goats are before the sheep or goats are removed from the property at which they are being kept to another property are—
 - (a) for grazing, feeding or exhibition if that other property has a different property identification code; or
 - (b) after private sale of the sheep or goats.

Division 4—General

43 Livestock prescribed for the purposes of section 9B

- (1) For the purposes of section 9B(1) of the Act, the prescribed classes of livestock are pigs, sheep, goats, horses, alpaca, llama, deer and poultry.

44 Applications for property identification code

- (1) For the purposes of section 9B(3)(a) of the Act, the prescribed manner is—
 - (a) in writing in the form approved by the Secretary; or
 - (b) by electronic communication on the Internet website of the department;
 - (c) sending to the Secretary by post, fax or by any other form or communication approved by the Secretary in the form approved by the Secretary.
- (2) For the purposes of section 9B(3)(b) of the Act, the following is the prescribed information—
 - (a) the name, postal address, telephone number, facsimile number (if any) and email address (if any) of the applicant, the person responsible for the husbandry of the livestock and the owner of the property; and
 - (b) details of the property (including the shire, parish, rural address, Council property number (if any) and grazing licence number (if applicable)); and
 - (c) the type and number of livestock running on the property at the time of the application; and
 - (d) if the ownership in the property changed within 12 months before the application, the name and address of the former owner and the previous property identification code that was issued in relation to the property.
- (3) For the purposes of paragraph (e) of the definition of *livestock business* in section 9B(7) of the Act, a prescribed class of business is—

- (a) a business undertaken by a stock and station agent; or
 - (b) a business dealing with the buying or selling of livestock or the carcasses of livestock; or
 - (c) a business dealing with the displaying or exhibiting of livestock; or
 - (d) an artificial breeding centre.
- (4) In this regulation *council* has the same meaning as in the **Local Government Act 1989**.

45 NLIS tags and devices are specific to property

A person, other than a person approved by an inspector, must not attach an NLIS device or NLIS ear tag to any livestock on a property if the property identification code visible on the NLIS ear tag or encoded on the NLIS device is not the property identification code allocated by the Secretary to that property.

Penalty: 5 penalty units.

46 Tags, devices and tattoo brands to be returned where livestock no longer kept at property

The owner of any cattle or livestock of a class prescribed in regulation 39, in respect of which a property identification code has been issued, who permanently ceases to keep the cattle or livestock on the property identified by the code must—

- (a) immediately notify the Secretary of that fact; and
- (b) return to the Secretary any unused ear tags or approved NLIS devices and any tattoo brands in the owner's possession that were to be used to identify the cattle, pigs, sheep or goats.

Penalty: 5 penalty units.

47 Carcase to remain identified until tests carried out

An operator of an abattoir or knackery must, in respect of all cattle, sheep, goats or pigs that the operator knows has not been purchased from a saleyard, ensure that any NLIS ear tag, NLIS device, tattoo or other identification tag that was attached to cattle, sheep, goats or pigs before being slaughtered is able to be related to the carcase of the cattle, sheep, goat or pig until the carcase has passed all examinations and tests required to be carried out by the inspection and quality assurance process at that abattoir or knackery.

Penalty: 10 penalty units.

Part 4—Introduction of livestock, livestock products, fodder or fittings into Victoria

Division 1—General

Division 1—Certification of livestock, livestock products, fodder or fittings introduced into Victoria

48 Prescribed manner of certification

For the purposes of section 10(2) and (3) of the Act, the following manner of certification is prescribed—

- (a) in the case of cattle from Queensland, Western Australia or the Northern Territory, that is not being sent directly to an abattoir for slaughter, a certificate in the form of Parts A and B of Schedule 4 completed by—
 - (i) the owner of the cattle 14 days or less before the introduction of the cattle into Victoria; and
 - (ii) an authorised officer;
- (b) in the case of pigs from Western Australia or the area of Queensland north of the Tropic of Capricorn or the Northern Territory, that are not being sent directly to an abattoir for slaughter, a certificate in the form of Parts A and B of Schedule 5 completed by—
 - (i) the owner of the pigs 14 days or less before the introduction of the pigs into Victoria; and
 - (ii) an authorised officer;
- (c) in the case of bees, bee products, pollen or used beekeeping fittings, a certificate (as the case requires) in the form of Parts A and B

of Schedule 6 or Parts A and B of Schedule 7 completed by—

- (i) the owner of the bees, bee products, pollen or used beekeeping fittings—
 - (A) one month or less before the introduction into Victoria of the bees, bee products, pollen or used beekeeping fittings; or
 - (B) Four months or less before the introduction into Victoria of a queen bee, escorts, queen cell or packaged bees; and
- (ii) a government apiary officer.

49 Owner must forward certificate to Secretary

- (1) An owner of livestock who has completed a certificate in the manner prescribed under regulation 46(a) or (b) must give that certificate to the Secretary 48 hours or less after the introduction of the relevant livestock into Victoria.
- (2) An owner of honey, beeswax, pollen or used beekeeping fittings who has completed a certificate in the manner prescribed under regulation 46(c) must give that certificate to the Secretary—
 - (a) in the case that the certificate is in the form of Parts A and B of Schedule 6, 48 hours or less after the introduction of the relevant bees, honey, beeswax, pollen or used beekeeping fittings into Victoria; or
 - (b) in the case that the certificate is in the form of Parts A and B of Schedule 7, 48 hours or less after the introduction of the relevant honey, beeswax, pollen or used beekeeping fittings into Victoria.

50 Copy of certificate must accompany livestock, livestock products etc.

- (1) A person who introduces cattle or pigs into Victoria that are the subject of a certificate completed in the manner prescribed under regulation 46(a) and (b) must ensure that a copy of the certificate—
 - (a) accompanies the relevant cattle or pig; and
 - (b) is given to the consignee specified in the certificate.
- (2) A person who introduces any bees, bee products, pollen or used beekeeping fittings into Victoria that are the subject of a certificate completed in the manner prescribed under regulation 46(c) must ensure that a copy of the certificate—
 - (a) accompanies the bees, bee products, pollen or used beekeeping fittings; and
 - (b) is given to the consignee specified in the certificate.

51 Consignee to retain copy of certificate

A consignee that has been given a copy of a certificate under regulation 48, must retain it for 3 months after the date of the certificate.

Penalty: 5 penalty units.

Division 2—Restrictions on introduction of livestock, livestock products, fodder or fittings into Victoria

52 Livestock subject to quarantine or restrictions on movement must not be introduced into Victoria

- (1) A person must not, without the written approval of the Secretary, introduce into Victoria from any

State or Territory of the Commonwealth any livestock (other than bees) which is—

- (a) from a quarantine area under the laws of that State or Territory; or
 - (b) subject to restrictions on movement under the laws of that State or Territory.
- (2) For the purposes of subregulation (1) the Secretary may give an approval subject to conditions (if any) if the Secretary is satisfied that the introduction of the livestock into Victoria is unlikely to lead to the transmission of disease from the livestock to other livestock or humans.

53 Restrictions on introduction of cattle from Queensland, Western Australia and Northern Territory

A person must not introduce into Victoria any cattle from Queensland, Western Australia or Northern Territory unless the cattle—

- (a) is in good health and free from cattle tick; and
- (b) travels by direct transport without being agisted or depastured en route except for any necessary stops for feeding and watering; and
- (c) has been inspected by the person required to complete Part A of Schedule 4, 14 days or less before introduction of the cattle.

54 Restrictions on introduction of pigs from the Northern Territory, Western Australia or Queensland

A person must not introduce into Victoria any pig from any area of Western Australia or Queensland north of the Tropic of Capricorn, or the Northern Territory unless—

- (a) it comes from a herd—
 - (i) recognised as being free of swine brucellosis by that State or Territory of the Commonwealth; or
 - (ii) in which swine brucellosis is not known to exist and the pig has, 30 days or less before entry into Victoria, been subjected to a blood test for swine brucellosis and the test has given a negative result; and
- (b) the pig is in good health and not under surveillance because of disease; and
- (c) the pig has been inspected by the person required to complete Part A of Schedule 5, 14 days or less before introduction of the pig.

55 Restrictions on introduction of bees, bee products, pollen and used beekeeping fittings—quarantine area

- (1) Subject to regulation 54(2) a person must not, without the written approval of the Secretary, introduce into Victoria any bees, bee products, pollen or used beekeeping fittings from an apiary that is under the laws of the State or Territory of the Commonwealth in which the apiary is located—
 - (a) in a quarantine area in respect of a disease of bees; or
 - (b) in an area subject to restrictions on the movement of bees, bee products, pollen or beekeeping fittings due to a disease of bees.
- (2) For the purposes of subregulation (1), the Secretary may give an approval subject to conditions (if any) if the Secretary is satisfied that the introduction of the bees, bee products, pollen or used beekeeping fittings into Victoria is

unlikely to lead to the transmission of disease from the bees, bee products, pollen or used beekeeping fittings to other livestock or humans.

56 Restrictions on introduction of bees, bee products, pollen and used beekeeping fittings—disease of bees

- (1) Subject to subregulation (2) a person must not introduce into Victoria any bees (including queen cells, queen bees, escorts, packaged bees), bee products, pollen or used beekeeping fittings unless they are—
 - (a) from an apiary recognised by the State or Territory of the Commonwealth in which the apiary is located as not showing symptoms of American foul brood disease; and
 - (b) from hives not showing field symptoms of any other disease of bees.
- (2) A person may introduce into Victoria any honey, beeswax or pollen, used beekeeping fittings or, hives affected by American foul brood disease if—
 - (a) the pollen and used beekeeping fittings have been sufficiently irradiated by gamma radiation to eliminate any American foul brood disease before introduction; or
 - (b) the honey, beeswax, pollen or used beekeeping fittings are placed in containers which are (except for containers placed inside a larger container and in that case only the larger container is labelled) labelled with weather-proof labels setting out—
 - (i) the name of the owner of the apiary from which the honey, beeswax, pollen or fittings originated or the name of the owner's agent; and

- (ii) a contact telephone number of an inspector and the words "This load contains American foul brood diseased material which is highly infectious to honey bees. In the event of an accident contact an apiary inspector appointed under the **Livestock Disease Control Act 1994** as soon as possible"; or
- (c) the person ensures that the honey or beeswax is treated at a processing plant approved by the Secretary to eliminate the American foul brood disease immediately after it's introduction into Victoria; or
- (d) the person ensures that the pollen or used beekeeping fittings will be sufficiently irradiated by gamma radiation to eliminate any American foul brood disease at a plant approved by the Secretary immediately after it's introduction into Victoria.

57 Prescribed requirement—introduction of bees

For the purposes of section 10(2)(a) of the Act it is a prescribed requirement that any bees, pollen or used beekeeping fittings from an apiary in Tasmania is not introduced into Victoria.

58 Prescribed requirement—introduction of comb honey

For the purposes of section 10(2)(a) of the Act it is a prescribed requirement that any comb honey from an apiary in Tasmania is not introduced into Victoria unless before the comb honey is introduced—

- (a) the comb honey is frozen to minus 15 degrees centigrade and held at that temperature for 24 hours; and
- (b) the comb honey is stored and transported in bee-free containers or transport vehicles; and

- (c) the comb honey is cut and packed in a bee-free area; and
- (d) no other comb honey was on the premises whilst the comb honey was being processed; and
- (e) copies of a temperature data log endorsed by the government apiary officer who completes the certificates referred to in regulations 48 and 49 accompany those certificates.

59 Prescribed requirement—introduction of pollen

For the purposes of section 10(2)(a) of the Act it is a prescribed requirement that any pollen for feeding to bees is not introduced into Victoria unless—

- (a) it has been irradiated to a minimum 15 kilogray before introduction; or
- (b) the person ensures that the pollen will be so irradiated immediately after its introduction.

60 Offence to feed pollen not irradiated to bees

A person must not feed to bees, pollen that has been introduced into Victoria, unless the pollen has been irradiated to a minimum 15 kilogray before or immediately after its introduction.

Penalty: 5 penalty units.

Part 5—Testing for diseases

61 Testing for diseases

- (1) For the purposes of section 16(2A)(f) and section 16(2B)(f), the prescribed information is the animal identifier.
- (2) For the purposes of section 16(3)(a) of the Act the prescribed standards are—
 - (a) in the case of the determination of whether or not a sample or specimen is infected with a disease—ANZSDP;
 - (b) in any other case, the relevant part of the ASDT for a disease.
- (3) For the purposes of section 16(4) of the Act the prescribed standard is AS ISO/IEC 17025—1999.

62 Records to be kept in relation to laboratory examinations

For the purposes of section 16(3)(b) of the Act, the following are the prescribed records—

- (a) a record of the date of submission of a sample or specimen;
- (b) a record of the name and address of the owner of the livestock from which the sample or specimen is submitted;
- (c) a record of the name and address of the person submitting the sample or specimen;
- (d) a record of the property identification code identifying the property at which the livestock is kept;
- (e) a record of the animal identifier;
- (f) a record of a brief description of the sample or specimen submitted;

- (g) a record of a brief description of the test, analysis or the diagnostic examination performed on the sample or specimen;
- (h) a record of a brief description of the results of the test, analysis or diagnostic examination;
- (i) a record of any comments on the relevance of the test, analysis or diagnostic examination performed;
- (j) a record of any provisional and final diagnosis in relation to the test, analysis or diagnostic examination.

63 Period that prescribed records are to be kept

An owner or person in charge of premises registered as a veterinary diagnostic laboratory must keep a record prescribed under regulation 62 for 7 years from the date that the prescribed record is submitted to the Secretary.

Penalty: 10 penalty units

64 Time and manner of reporting

For the purposes of section 16(3)(b) of the Act, the prescribed time and manner is—

- (a) in the case of a disease listed in Part A of Schedule 2, immediately after the test, analysis or diagnostic examination is completed, by hand delivery or electronic transmission; and
- (b) in the case of a disease listed in Part B of Schedule 2, within 7 days after the test, analysis or diagnostic examination is completed, by hand delivery, post or electronic transmission; and
- (c) in the case of an exotic disease, immediately after the test, analysis or diagnostic

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examination is completed, by hand delivery
or electronic transmission.

Part 6—Prevention of spread of disease

Division 1—Vaccinating of livestock

65 Requirement to vaccinate for Newcastle disease

- (1) An owner of a commercial flock of poultry, other than an owner who holds the approval given by the chief veterinary officer, must ensure that all chickens in the commercial flock of poultry are vaccinated and serologically monitored in accordance with the Newcastle Disease Management Plan.

Penalty: 10 penalty units.

- (2) An owner of a commercial flock of poultry, other than an owner who holds an approval given by the chief veterinary officer, must ensure, that any chickens introduced into the flock—
 - (a) have been vaccinated in accordance with the Newcastle Disease Management Plan; and
 - (b) are accompanied by a vendor declaration that includes the following particulars—
 - (i) the age and number of chickens;
 - (ii) the date of vaccination and type of Newcastle disease vaccine administered.

Penalty: 10 penalty units.

- (3) An owner of a commercial flock of poultry must on the direction of the chief veterinary officer, submit the chickens for sampling for Newcastle disease to a veterinary practitioner or an inspector approved by the Secretary.

Penalty: 10 penalty units.

- (4) An owner of a commercial flock of poultry must notify the chief veterinary officer of any adverse reaction or suspected adverse reaction to any Newcastle disease vaccine administered to the

commercial flock of poultry within 48 hours of the vaccination being administered.

Penalty: 10 penalty units.

- (5) An owner of a commercial flock of poultry must from the date of the administration of a Newcastle disease vaccine to the commercial flock of poultry keep for 3 years the following records—
- (a) any vendor declarations received for chickens introduced to the commercial flock of poultry;
 - (b) any records of the type of Newcastle disease vaccine administered to the commercial flock of poultry and the date, location and age and number of chickens vaccinated;
 - (c) any records of serological monitoring of the commercial flock of poultry for Newcastle disease.

Penalty: 10 penalty units.

- (6) A person other than a person who holds an approval of the chief veterinary officer, must ensure that chickens introduced into a commercial flock of poultry—
- (a) have been vaccinated in accordance with the Newcastle Disease Management Plan; and
 - (b) are accompanied by a vendor declaration that includes the following particulars—
 - (i) the age and number of the chickens;
 - (ii) the date of vaccination and type of Newcastle disease vaccine administered.

(7) In this regulation an **owner** means an owner of a commercial flock of poultry but does not include—

- (a) an owner of a commercial flock of poultry who is the holder of a permit issued under section 30(2) of the Act who is operating

- in accordance with that permit while that permit is in force; or
- (b) an owner of a commercial flock of poultry tested by a veterinary diagnostic laboratory registered by the Secretary under section 16(1) of the Act found to not contain a pathogen capable of causing disease.

66 Restrictions on the use of vaccines for certain diseases

- (1) A person other than a person who is authorised by the Secretary under regulation 67, must not administer a vaccine to any livestock for the control or treatment of anthrax or any exotic disease.

Penalty: 10 penalty units.

- (2) A person who is authorised under regulation 67 must comply with any condition that applies to that authorisation.

Penalty: 10 penalty units

- (3) In the case where the person authorised under regulation 67 is not the owner of the livestock to be vaccinated, the owner of livestock must not without reasonable excuse refuse or fail to provide such assistance as a person or a class of persons authorised under regulation 67 may reasonably require to administer a vaccine to the owner's livestock.

Penalty: 10 penalty units

67 Authorisation of person or class of person to administer vaccine

- (1) The Secretary, by instrument, may authorise a person or class of persons to administer a vaccine to any livestock for the control or treatment of anthrax or an exotic disease.

- (2) The terms and conditions of an authorisation of a person or class of persons under subregulation (1) may—
 - (a) direct that an authorisation is limited to specific livestock or class of livestock; and
 - (b) direct that an authorisation is limited to a specific vaccine; and
 - (b) contain general directions as to how the person's authorisation may be exercised; and
 - (c) impose conditions, requirements or restrictions which may include—
 - (i) requirements for mustering, separation or isolation for vaccination, during vaccination or for a specified period after vaccination; or
 - (ii) restrictions on slaughter of the livestock for human consumption,
 - (iii) requirements for, or restrictions on the sale or export from Victoria of the livestock.
- (3) The Secretary, in writing, may vary or revoke the authorisation of a person or a class of person at any time.

68 Requirement for vaccination for anthrax

- (1) An inspector, by notice in writing, may require an owner of livestock to vaccinate the owner's livestock and any other livestock born or introduced to a property on which the livestock is kept during the period specified in the notice if the inspector believes on reasonable grounds that—
 - (a) livestock are infected with anthrax; or
 - (b) livestock are at risk of becoming infected with anthrax; or

- (c) anthrax is present on a property on which the livestock is kept; or
 - (d) there is a risk that anthrax may be present on a property on which the livestock is kept.
- (2) A notice given under this regulation may—
- (a) apply to livestock of a specified species; or
 - (b) specify the period within which the notice applies; or
 - (c) require one or more vaccinations over a period that the notice applies; or
 - (d) require vaccination occur within a specified time including a specified time of a year or at a specified age of the livestock; or
 - (e) require the livestock to be identified in a specified manner prior to the livestock being submitted for vaccination; or
 - (f) impose conditions, requirements or restrictions relating to the livestock or specified species of livestock to which the notice applies which may include—
 - (i) requirements for mustering, separation or isolation of the livestock for vaccination, during vaccination or for a specified period after vaccination; or
 - (ii) restrictions on slaughter of the livestock for human consumption; or
 - (iii) requirements for, or restrictions on the sale or export from Victoria of the livestock.
- (3) An owner given a notice under this regulation must comply with the notice and any conditions or restrictions imposed under the notice.

Penalty: 20 penalty units

69 Secretary may approve keeping of babesiosis vaccinated livestock in Victoria

A person must not keep in Victoria, livestock vaccinated for babesiosis unless—

- (a) the Secretary has approved the keeping of the livestock due to the livestock being injured or unable to travel; or
- (b) the livestock is to be dispatched for slaughter at an abattoir or disposal at a knackery; or
- (b) the livestock is identified with an approved NLIS device and the Secretary is notified of the vaccination.

70 Notice to Secretary

A person engaged in administering any vaccine, serum or diagnostic agent to livestock must, within 48 hours after the administration, notify the Secretary of any livestock that—

- (a) shows evidence of infection with the disease that is the subject of the vaccine, serum or diagnostic agent; or
- (b) shows an adverse reaction to the vaccine, serum or diagnostic agent.

Penalty: 10 penalty units.

71 Identification of livestock vaccinated for Johne's disease

A person vaccinating livestock for Johne's disease must ensure that the livestock are identified—

- (a) in the case of a sheep or goat, by an approved NLIS ear tag or ear tag in the form of Part G or H of Schedule 3 (as the case requires) that—
 - (i) is attached to an ear of the sheep or goat; and

- (ii) is printed on one side with the NLIS logo and the property identification code that identifies the property on which the sheep or goat was vaccinated; and
 - (iii) is printed on the other side with the capital letter "V" inside a circle; and
- (b) in any other case—
- (i) by a three hole ear punch in an ear of the livestock; or
 - (ii) in any other manner approved by the Secretary.

Penalty: 10 penalty units.

Division 2—Dairy produce

72 Treatment of dairy produce for use as livestock food

A person must not remove skim milk, butter milk or whey from any premises where dairy produce is received for the purpose of feeding it to livestock unless it—

- (a) has been heated to a temperature of not less than 71°C and held at that temperature for at least 15 seconds; or
- (b) was derived from dairy produce which has been subjected to one of the following heat treatment procedures—
 - (i) held at a temperature of not less than 63°C for not less than 30 minutes;
 - (ii) held at a temperature of not less than 71°C for not less than 15 seconds;
 - (iii) held at a temperature of not less than 82°C for not less than 2 seconds;
 - (iv) held at a temperature of not less than 132°C for not less than 1 second.

Penalty: 10 penalty units.

Division 3—Exotic disease agents

73 Handling and use of exotic disease agents

For the purposes of section 39(2) of the Act a person who has the authority of the Secretary must maintain the exotic disease agent—

- (a) within the security of the building that is the office of the Australian Animal Health Laboratory, at 5 Portarlington Road East Geelong, Victoria or any subsequent address of that office; or
- (b) within any other laboratory approved by the Secretary if the exotic disease agent—
 - (i) is maintained in in-vitro systems; and
 - (ii) is maintained under any other conditions imposed by the Secretary; and
 - (iii) with the approval of the Secretary, is only used to perform tests, prepare re-agents for tests or undertake research for the diagnosis, monitoring or surveillance for the presence of the exotic disease in livestock in Australia.

Division 4—Dairying animals

74 Identification of cows, goats, sheep or buffalo prohibited for dairying

For the purposes of section 45(1)(b) of the Act the prescribed manner of branding is by way of an ear tag in the form of Part M of Schedule 3.

Division 5—Bees

75 Hives to be marked with registered brand

For the purposes of section 50(1) of the Act, the prescribed manner for marking or branding a hive is to burn, stencil, paint, endorse, stamp, carve or etch the letters, figures or symbols constituting the registered brand so that the brand is clear and legible and not less than 19 millimetres in height.

76 Disposal and acquisition of hives

For the purposes of section 51(1) of the Act the prescribed form is the form in Schedule 8.

Division 6—Artificial breeding

77 Record of sales of semen from sires

- (1) For the purposes of section 55(4) of the Act, the prescribed records are the following—
 - (a) a record of the address of the premises from which the semen was received;
 - (b) a record of the premises at which the semen was collected from the sire;
 - (c) a record of the identity of the sire from which the semen was collected;
 - (d) a record of the batch number of the semen;
 - (e) a record of a statement as to whether the semen was chilled or frozen when sold;
 - (f) a record of the name and address of the person to whom the semen was sold; and
 - (g) a record of the date on which the semen was sold;
 - (h) in the case of semen that is not sold a record of—
 - (i) the particulars of any semen stored at the premises; or
 - (ii) the method and date of disposal of the semen.

- (2) For the purposes of section 55(4) the prescribed manner is that the records prescribed under subregulation (1) must be completed and reconciled at least once a month.

78 Health of livestock must be declared annually

For the purposes of section 98(2) of the Act the prescribed conditions of a licence granted under section 57 are—

- (a) that the licensee before 15 January each year ensure that—
- (i) a certificate in the form of Part A of Schedule 9 as to the health of the livestock on the premises for the preceding calendar year is certified by a veterinary practitioner; and
 - (ii) a statement in the form of Part B of Schedule 9 as to the health of the livestock on the premises is made by the licensee of the premises; and
- (b) that the licensee ensure as soon as practicable after a certificate is certified and a statement is made under paragraph (a) that the certificate and the statement are given to the Secretary.

Part 7—Compensation

79 Prescribed manner of applying for compensation

- (1) Subject to subregulation (2) for the purposes of section 88(1) of the Act the prescribed manner is—
 - (a) that an application is made in writing to the Secretary; and
 - (b) that an application is accompanied by the following information—
 - (i) details of the numbers of, description of, condition of, and disease which affected, any livestock, premises, livestock products, fodder, fittings or vehicles which were or are to be destroyed or disinfected;
 - (ii) the market value of each item of property referred to in paragraph (i);
 - (iii) the agreement of the owner to the valuation of each item of property;
 - (iv) a certificate of an inspector stating that each item of property was destroyed or disinfected in accordance with an order by an inspector;
 - (v) the date of destruction of each item of property;
 - (vi) a declaration by the claimant as to the claimant's and any other person's interest in or entitlement over each item of property;
 - (vii) the property identification code (if any) relating to any livestock that is the subject of an application.
- (2) For the purposes of section 88(1) of the Act, in the case of an application for compensation for

a carcase or portion of a carcase condemned as unfit for human consumption under the **Meat Industry Act 1993** or the Export Control Act 1982 of the Commonwealth the prescribed manner is—

- (a) that the application is made in writing to the Secretary; and
- (b) that the application is accompanied by the following information—
 - (i) details of the number, description and condition of the livestock prior to slaughter;
 - (ii) details of the disease which affected the carcase or portion of carcase of the livestock after slaughter;
 - (iii) details of the value claimed for each of the carcasses that were condemned;
 - (iv) the animal identifier incorporated in the microchip contained in any NLIS device or the NLIS number printed on that device attached to the livestock before slaughter;
 - (v) details of any tail tag, ear tag or tattoo brand (as the case may be) borne by the livestock before slaughter;
 - (vi) certification of the details of condemnation by a person responsible for quality assurance under the **Meat Industry Act 1993** or the Export Control Act 1982 of the Commonwealth;
 - (vii) the date of destruction of the condemned carcase;
 - (viii) a copy of the invoice issued under section 95(5), 95A(5) or 95B(5) of the

Act for the purchase of the livestock
or carcase.

80 Time limits for applying for compensation

For the purposes of section 88(1) of the Act the prescribed time limit is—

- (a) in the case of a compensatable exotic disease, within 30 days from—
 - (i) the date of the destruction or death of any domestic livestock; and
 - (ii) the date of destruction of any premises, livestock product, fodder, fittings or vehicle; and
- (b) in the case of a compensatable disease in respect of bees, sheep, goats, cattle or swine, within 30 days from—
 - (i) the date on which any livestock was destroyed; or
 - (ii) in the case of any livestock that dies before being destroyed, the date on which it died after being ordered to be destroyed by an inspector; and
- (c) in the case of a compensatable disease in respect of bees, within 30 days from the date on which any bee product, beekeeping fittings or other article was destroyed or disinfected; and
- (d) in the case of an application for compensation pursuant to which section 79E(c) of the Act applies, within 30 days or such other period approved by the chief veterinary officer.

81 Cattle Compensation Advisory Committee

For the purposes of section 79(3A) of the Act—

- (a) the Victorian Farmers Federation is the prescribed body that represents the cattle industry;
- (b) the Australian Livestock and Property Agents Association Limited is the prescribed body that represents the livestock agents profession;
- (c) the Australian Meat Industry Council is the prescribed body that represents the meat processing industry.

82 Sheep and Goat Compensation Advisory Committee

For the purposes of section 79I(3A) of the Act—

- (a) the Victorian Farmers Federation is the prescribed body that represents the sheep industry and the goat industry;
 - (b) the Australian Livestock and Property Agents Association Limited is the prescribed body that represents the livestock agents profession;
 - (c) the Australian Meat Industry Council is the prescribed body that represents the meat processing industry.
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Part 8—Records of sale, purchase and movement of livestock

Division 1—General

83 Definitions and interpretation

(1) In this Part—

livestock manager means in relation to a property the person responsible for the husbandry of livestock at that property;

scale operation includes any business that purchases cattle by liveweight or price per head.

(2) In this Part a property identification code in relation to livestock that have been introduced from, or that are to be dispatched to, another State or Territory of the Commonwealth includes an identification code or number issued in accordance with a law of that State or Territory that corresponds with section 9B of the Act.

(3) In this Part, if livestock are dispatched from one property to another and a property identification code identifying the property that the livestock were dispatched to or from has not been issued by the Secretary under section 9B of the Act or in accordance with a corresponding law of another State or a Territory of the Commonwealth (as the case requires), the address of the property (not being a saleyard) on which the livestock were kept before being dispatched or are to be kept after being dispatched may be used.

84 Records about livestock sold

(1) For the purposes of section 94A(1) of the Act—

- (a) the prescribed species of livestock are the following—
 - (i) cattle;
 - (ii) sheep;
 - (iii) goats;
 - (iv) deer;
 - (v) pigs; and
- (b) a prescribed business is the business of carrying on as an auctioneer; and
- (c) the prescribed particulars are the following—
 - (i) the name and address of the seller;
 - (ii) the date of the sale;
 - (iii) the location of the sale;
 - (iv) a description of the livestock including species, age and sex;
 - (v) the number of head in the sale lot;
 - (vi) the name, address and property identification code of the purchaser;
 - (vii) if stated in the vendor declaration, whether the livestock were bred by the vendor;
 - (viii) in the case of cattle, sheep and goats the property identification code identifying the property where the cattle, sheep or goats were kept before the sale (not being the saleyard or scales operation where the cattle, sheep or goats were sold);
 - (ix) in the case of cattle, the property identification code identifying the property where the cattle are to be kept

after the sale (if provided by the purchaser of the cattle).

85 Records about livestock purchased

(1) For the purposes of section 94A(2) of the Act—

(a) a prescribed business is the business of carrying on as—

- (i) a cattle scale operator; or
- (ii) a farmer; or
- (iii) a grazier; or
- (iv) a livestock buyer; and

(b) a prescribed species of livestock is cattle, sheep and goats; and

(c) the prescribed particulars about the cattle, sheep or goats are the following—

- (i) the name and address of the purchaser;
- (ii) the property identification code identifying the property at which the cattle, sheep or goats are to be taken after the purchase;
- (iii) whether the cattle, sheep or goats are to be dispatched directly to an abattoir or knackery for slaughter or disposal within 7 days of its purchase.

(2) For the purposes of section 94A(2)(b) a prescribed seller is a person who carries on business as—

- (a) an auctioneer; or
- (b) a cattle scale operator; or
- (c) a selling agent.

86 Notification about slaughter or disposal of livestock

For the purposes of section 94B(a)(iv) of the Act, the prescribed information in the case of individual cattle, other than calves which are less than 6 weeks of age, is—

- (a) the weight of the carcase prior to chilling and after bleeding, skinning, evisceration and trimming (*hot standard carcase weight*); or
- (b) the weight of the carcase immediately after slaughter prior to the evisceration and the removal of the hide (*slaughter weight*).

Division 2—Information about the movement of cattle, sheep and goats

87 Definitions

In this Division—

cattle movement information, means in respect of cattle—

- (a) the animal identifier and number incorporated in the microchip contained in the NLIS device used to identify the cattle;
- (b) the serial number on any vendor declaration form accompanying the cattle;
- (c) the date on which (as the case requires)—
 - (i) the cattle were sold or passed in at the public auction or cattle scale operation (as applicable); or
 - (ii) the cattle were introduced to the new property; and
- (d) the property identification code identifying the property at which the cattle were kept before being dispatched (not being a saleyard or scale operation at

- which the cattle were sold or passed in);
and
- (e) the property identification code of the property at which the cattle are being kept; and
 - (f) in the case of cattle less than 6 weeks of age and not accompanied by their dam, the time the number referred to in paragraph (a) was recorded; and

pig, sheep or goat movement information means in respect of a pig, sheep or goat—

- (a) the date of sale;
- (b) the number of pigs, sheep or goats in the lot;
- (c) the serial number on any vendor declaration form accompanying the pigs, sheep or goats;
- (d) the property identification code identifying the property at which the pigs sheep or goats were kept before being dispatched;
- (e) the property identification code of the property to which the pigs, sheep or goats will be dispatched;
- (f) whether or not the pigs, sheep or goats are vendor bred and if not, the period of time they resided on the property from which they were dispatched;
- (g) in the case that the pigs, sheep or goats are not vendor bred and are not identified with an NLIS device, the property identification codes

specified on the vendor declaration as property identification codes that are recorded on NLIS ear tags on pigs, sheep or goats (not being the property identification code identifying the property from which the pigs, sheep or goats were dispatched;

- (h) the unique number encoded in any NLIS device;
- (i) for every pig, sheep or goat identified with an NLIS device the first 8 visual characters on the NLIS device where it is not identifying the property from which the pigs, sheep or goats were dispatched; and
- (j) an electronic copy of the vendor declaration accompanying the pigs, sheep or goats.

pig movement information means in respect of a pig—

- (a) the date of introduction of the pig to the property;
- (b) the property identification code of the property to which the pig was introduced;
- (c) the property identification code of the property from which the pig was moved;
- (d) the number of pigs that have been introduced;
- (e) the unique number on the vendor declaration that accompanied the pigs;
- (f) whether the pig was bred on the property from which it was moved, and if not, the period of time the pig was kept on the property from which it was moved.

sheep or goat movement information means in respect of a sheep or goat—

- (a) the date of introduction of the sheep or goat to the property;
- (b) the property identification code of the property to which the sheep or goat was introduced;
- (c) the property identification code of the property from which the sheep or goat was moved;
- (d) the number of sheep or goats that have been introduced;
- (e) the unique number on the vendor declaration that accompanied the sheep or goat;
- (f) whether or not the sheep or goat are vendor bred;
- (g) in the case that the sheep or goat are not vendor bred and are not identified with an NLIS device, the property identification codes specified in the vendor declaration as properties on which the sheep or goats have been kept (not being the property identification code identifying the property from which the sheep or goats were dispatched);
- (h) for every sheep or goat identified with an NLIS device the first 8 visually readable characters on the NLIS device where the device is not identifying the property from which the pigs, sheep or goats were dispatched.

the specified manner in relation to the recording of movement information, means the manner specified by the Secretary by notice published in the Government Gazette;

the required manner or by the required method of transmission in relation to the forwarding of information to the Secretary or to such other persons specified in this Division, means the manner or the method of transmission, required by the Secretary by notice published in the Government Gazette.

88 Cattle scale operator to record movement information and forward it to Secretary

A person who carries on a business as a cattle scale operator must—

- (a) record the cattle movement information in the specified manner for each head of cattle sold or passed in; and
- (b) if the cattle are to be dispatched directly to an abattoir for slaughter or to a knackery for disposal within 7 days of being sold or passed in, must forward to the Secretary or a person nominated by the Secretary in the required manner or by the required method of transmission—
 - (i) the cattle movement information (other than the property identification code identifying property at which the cattle are to be kept after being sold or passed in) before the cattle leave the scale; and
 - (ii) the cattle property identification code identifying the property at which the cattle are to be kept after being sold or passed in (if provided by the purchaser or owner), by close of business on the next day after the cattle are sold or passed in; and
- (c) for each head of cattle purchased at less than 6 weeks of age and not accompanied by their dam, record the number encoded in the NLIS

device attached to the cattle and the time of the reading of the device, before taking possession of the cattle; and

- (d) in any other case, forward to the Secretary or a person nominated by the Secretary in the required manner or by the required method of transmission the cattle movement information by close of business on the next day after the cattle are sold or passed in.

Penalty: 20 penalty units.

89 Auctioneer or selling agent of cattle, sheep or goats sold other than at a saleyard to record movement information and forward it to Secretary

A person who conducts a public auction or sale other than at a saleyard, of cattle, sheep or goats required under these regulations to be identified with an NLIS device—

- (a) must record the movement information in the specified manner for each head of cattle, sheep or goats sold or passed in at the auction; and
- (b) if advised by the purchaser or owner of the cattle, sheep or goats that the cattle, sheep or goats (as applicable) are to be dispatched directly to an abattoir for slaughter or to a knackery for disposal within 7 days of being sold or passed in, must forward to the Secretary or a person nominated by the Secretary in the required manner or by the required method of transmission—
 - (i) the movement information (other than the property identification code identifying the property at which the cattle, sheep or goats are to be kept after being sold or passed in) before the

cattle, sheep or goats leave the place of public auction; and

- (ii) the property identification code of the property at which the cattle, sheep or goats are to be kept after being sold or passed in (if provided by the purchaser or owner) by close of business on the next day after the cattle, sheep or goats are sold or passed in; and
- (c) in any other case, forward to the Secretary or a person nominated by the Secretary in the required manner or by the required method of transmission the movement information by close of business on the next day after the cattle, sheep or goats are sold or passed in.

Penalty: 20 penalty units.

90 Auctioneer or selling agent of cattle to provide information to saleyard operator and operator of an abattoir or knackery

- (1) A person who conducts a public auction of cattle at a saleyard must, for each head of cattle sold or passed in at that auction, provide to the operator of the saleyard in the required manner —
 - (a) if the purchaser is the operator of an abattoir or knackery within 7 days after being sold or passed in advice to be provided before the cattle are dispatched from the saleyard; that—
 - (i) the cattle are to be dispatched directly from the saleyard to an abattoir for slaughter or to a knackery for disposal within 7 days after being sold or passed in;
 - (ii) the property identification code identifying the property

at which the cattle were kept before being sold or passed in and the serial number on any vendor declaration form accompanying the cattle; and

(iii) the property identification code identifying the property at which the cattle are to be kept after the sale; and

(b) in any other case the following information by midday on the next day after the cattle, are sold or passed in—

(i) the property identification code identifying the property at which the cattle were kept before being sold or passed in;

(ii) the serial number on any vendor declaration form accompanying the cattle;

(iii) the property identification code identifying the property at which the cattle are to be taken after being sold or passed in.

(2) A person who conducts a public auction of cattle at a saleyard must, if the purchaser is the operator of an abattoir or knackery, provide in the required manner, the movement information in respect of those cattle, to the operator of the abattoir or knackery by midnight on the day of sale.

Penalty: 20 penalty units.

91 Saleyard operator to record movement information and forward it to Secretary

A person who operates a saleyard at which cattle are sold or passed in must—

- (a) record the movement information in the specified manner for each head of cattle sold or passed in at the auction; and
- (b) if the purchaser is the operator of an abattoir or knackery within 7 days after being sold or passed in, must forward to the Secretary or a person nominated by the Secretary in the required manner or by the required method of transmission—
 - (i) the movement information (other than the property identification code identifying the property at which the cattle are to be kept after being sold or passed in) before the cattle are dispatched from the saleyard; and
 - (ii) the property identification code identifying the property at which the cattle are to be kept after being sold or passed in (if provided by the purchaser or owner of the cattle) by close of business on the next day after the cattle are sold or passed in; and
- (a) in any other case, forward to the Secretary or a person nominated by the Secretary in the required manner or by the required method of transmission—
 - (i) the cattle movement information; and
 - (ii) the property identification number of the saleyard—
by close of business on the next day after the cattle are sold or passed in.

Penalty: 20 penalty units.

92 Auctioneer or selling agent of pigs, sheep and goats at a saleyard to record and forward movement information

- (1) A person who conducts a public auction or sale of pigs, sheep or goats, at a saleyard must record in the specified manner, the movement information for every lot of pigs, sheep or goats sold or passed in; and
- (2) provide that information in the required manner to the operator of the saleyard by close of business on the day following the day of sale; and
- (3) if the purchaser is the operator of an abattoir or knackery provide the movement information in respect of those pigs, sheep or goats in the required manner to the operator of the abattoir or knackery, by midnight on the day of sale.

Penalty: 20 penalty units

93 Saleyard operator to record information about pigs, sheep and goats and forward it to Secretary

A person who operates a saleyard at which pigs, sheep or goats are sold or passed in must record in a manner specified by the Secretary and forward to the Secretary or person nominated by the Secretary, in the manner required by the Secretary within 2 working days of a sale, a record that specifies—

- (a) the pig, sheep, goat movement information; and
- (b) as deceased any pig, sheep or goat that died in transit to, or before dispatch from the saleyard and in respect of each deceased sheep or goat, the first 8 visual numbers on the NLIS ear tag or NLIS device.

Penalty: 20 penalty units

94 Purchaser's agent to update purchaser information

If an agent has purchased livestock on behalf of a purchaser and provided the selling agent with their own property identification code, the agent must, within 7 days of the sale update the NLIS database with the required movement information including the property identification code of the property of the purchaser.

Penalty: 5 penalty units.

95 Operator of an abattoir or knackery to record and forward movement information to the Secretary

- (1) An operator of an abattoir or knackery must—
- (a) record the required information for cattle, sheep, goats slaughtered or processed (as the case may be) and ensure the records are correct; and
 - (b) within 2 days of the slaughter of the livestock forward the required information to the Secretary or person nominated by the Secretary in the required manner.

Penalty: 5 penalty units.

- (2) In this regulation *required information* means—
- (a) the property identification code of the property from which the cattle, sheep and goats were sourced;
 - (b) the property identification code of the knackery or abattoir;
 - (c) the date of slaughter or processing of the livestock;
 - (d) the unique number on a vendor declaration (if applicable);
 - (e) in the case that the cattle, sheep or goats were identified with an NLIS device, the unique number encoded on the NLIS device;
 - (f) in the case of cattle less than 6 weeks of age and not accompanied by their dam, the time the number referred to in paragraph (e) was recorded.

96 Owner to record movement information and forward it to Secretary

- (1) An owner of livestock or the owner of a property who introduces or allows the introduction of cattle, pigs, sheep or goats that have not been dispatched directly from a scale operation, saleyard or a public auction onto the property, must for each head of cattle, pig, sheep or goat introduced or allowed to be introduced—
- (a) record as the case requires, the cattle movement information, pig movement information or sheep and goat movement information; and
 - (b) give the relevant information under paragraph (a) to the Secretary or a person nominated by the Secretary in the required manner or by the required method of transmission—
 - (i) in the case that the cattle, pigs, sheep or goats are to be removed from the property less than 2 days after being introduced to the property, before that removal; or
 - (ii) in any other case, within 2 days of being introduced to the property.
- Penalty: 20 penalty units.
- (2) An owner of livestock or the owner of a property who introduces or allows the introduction of cattle, pigs, sheep or goats onto that property must not dispatch the cattle, pigs, sheep or goats from the property unless the property identification code of the owner of the property has, before the dispatch, been recorded

on the NLIS database as the property on which the cattle, pigs, sheep or goats are kept.

Penalty: 20 penalty units

97 Persons must not forward incorrect information

A person, who under this Division is required to forward information to the Secretary, a person nominated by the Secretary or to the operator of a saleyard, must not in purported compliance with a requirement forward information that the person knows is false or misleading in a material particular.

Penalty: 20 penalty units.

Division 3—Information about the movement of livestock

98 Person dispatching cattle, sheep or goats to provide property identification code

- (1) Subject to subregulation (2) a person who dispatches cattle, sheep or goats from a property, must provide at the time of delivery of the cattle, sheep or goats, in writing to the following persons, the property identification code identifying the property—
 - (a) the livestock manager of the property to which the cattle, sheep or goats are dispatched;
 - (b) the auctioneer or selling agent at the saleyard to which the cattle, sheep or goats are dispatched;
 - (c) the auctioneer at the property (other than a saleyard) from which the cattle, sheep or goats will be dispatched;

- (d) in the case of cattle, the scale operator at the scale operation to which the cattle are dispatched;
- (e) the person operating the abattoir or knackery to which the cattle, sheep or goats are dispatched.

Penalty: 20 penalty units.

- (2) This regulation does not apply to a person who dispatches cattle, sheep or goats—
 - (a) directly from a scale operation or a public auction (including an auction conducted at a saleyard) after the cattle, sheep or goats are sold or passed in; or
 - (b) who is the livestock manager for the cattle, sheep or goats at the property from which the cattle, sheep or goats are dispatched and the property to which the cattle, sheep or goats are dispatched.

99 Person acquiring sheep and goats to provide information

- (1) A person purchasing or receiving sheep or goats must provide to the person selling or dispatching the sheep or goats or to that person's selling agent (as the case requires) with the property identification code of the property to which the sheep or goats are to be sent.

Penalty: 5 penalty units.

- (2) For the purposes of sub regulation (1) the property where the sheep or goats are to be sent is the next property where the sheep or goats will be sent which in the case where the sheep or goats are sent to a holding yard or depot, that place.

100 Person receiving pigs to ensure recording of movement information

An owner who has received pigs dispatched from a property with a different property identification code to that issued to the property from which the pigs were dispatched or if the property of dispatch does not have a property identification code, must, within 2 days of the arrival of the pigs, ensure that the following information is recorded on the NLIS database:

- (a) the number of pigs;
- (b) the property identification code of the property from which the pigs were dispatched;
- (c) the property identification code of the property to which the pigs were dispatched;
- (d) the serial number on the vendor declaration (if any);
- (e) whether the pigs were bred on the property from which they were dispatched and if not the period of time the pigs were on the property of dispatch.

101 Offence to record false information on NLIS database

A person must not in purported compliance with a requirement to record information in the NLIS database record information that the person knows is false or misleading in a material particular.

Penalty: 10 penalty units.

Part 9—Duty returns and invoices

102 Returns furnished by approved agent for sales and purchases of cattle

For the purposes of section 95(1) of the Act in the case of cattle the prescribed form is —

- (a) that the return be in writing and set out—
 - (i) the number of cows, calves or carcasses of cattle sold; and
 - (ii) the amount of cattle duty to be paid on the return; and
 - (iii) the month to which the return relates; and
 - (iv) the number assigned to the approved agent under section 248A of the **Duties Act 2000**; and
- (b) the prescribed manner is that a return be verified by the person making the return setting out the person's name and signature at the foot of the return.

103 Returns furnished by approved agent for sales and purchases of sheep and goats

For the purposes of section 95A(1) of the Act in the case of sheep or goats—

- (a) the prescribed form is that a return be in writing and set out—
 - (i) the number of sheep, goats or carcasses of sheep or goats sold; and
 - (ii) the amount of sheep or goat duty to be paid on the return; and
 - (iii) the month to which the return relates; and
 - (iv) the number assigned to the approved agent under section 248A of the **Duties Act 2000**; and
- (b) the prescribed manner is that a return be verified by the person making the return setting out the person's name and signature on the foot of the return.

104 Returns furnished by approved agent for sales and purchases of pigs

For the purposes of section 95B of the Act, in the case of pigs—

- (a) the prescribed form is that a return be in writing and set out—
 - (i) the number of pigs or carcasses of pigs sold; and
 - (ii) the amount of pig duty to be paid on the return; and
 - (iii) the month to which the return relates; and
 - (iv) the number assigned to an approved agent under section 248A of the **Duties Act 2000**; and
- (b) the prescribed manner is that a return be verified by the person making the return setting out the person's name and signature at the foot of the return.

105 Invoices and statements issued in relation to the sale of cattle

For the purposes of section 95(5) or (7) of the Act the following are the prescribed particulars—

- (a) the date of the sale of the cattle, calves or carcasses of cattle;
- (b) the pen number of the cattle or calves sold;
- (c) the number of cattle, calves or carcasses of cattle sold;
- (d) the age, sex and class of the cattle or calves sold;

- (e) the price paid for each head of cattle or calf or for each carcase;
- (f) the name of the person who purchased the cattle, calves or carcasses of cattle;
- (g) the property identification code of the property from which the cattle or calves were dispatched prior to their sale or slaughter or the name and address of the person who sold the cattle, calves or carcasses of cattle.

106 Invoices and statements issued in relation to the sale of sheep or goats

For the purposes of section 95A(5) or (7) of the Act the following are the prescribed particulars—

- (a) the date of the sale of the sheep, goats or carcasses of sheep or goats;
- (b) the pen number of the sheep or goats sold;
- (c) the number of sheep, goats or carcasses of sheep or goats sold;
- (d) the age, sex and class of the sheep or goats sold;
- (e) the price paid for each head of sheep or goat or carcass of sheep or goat;
- (f) the name of the person who purchased the sheep, goats or carcasses of sheep or goats;
- (g) the property identification code of the property from which the sheep or goats were dispatched prior to their sale or slaughter or the name and address of the person who sold the sheep, goats or the carcasses of sheep or goats.

107 Invoices and statements issued in relation to the sale of pigs

For the purposes of section 95B(5) or (7) of the Act the following are the prescribed particulars—

- (a) the date of the sale of the pigs or carcasses of pigs;
 - (b) the pen number of the pigs sold;
 - (c) the number of pigs or carcasses of pigs sold;
 - (d) the age, sex and class of the pigs sold;
 - (e) the price paid for each head of pig or carcass of pig;
 - (f) the name of the person who purchased the pigs or carcasses of pigs;
 - (g) the property identification code of the property from which the pigs were dispatched prior to their sale or slaughter or the name and address of the person who sold the pigs or the carcasses of pigs.
-

Part 10—Administration

108 Grounds for refusing to grant or renew licence

For the purposes of section 98(4)(b) of the Act the following grounds are prescribed—

- (a) the relevant premises are not or are no longer provided with the buildings, fittings or equipment to ensure the continuous sanitary condition of the premises;
- (b) the relevant premises and equipment are not or are no longer maintained in a state of good repair and hygiene;
- (c) precautions are not or have not been taken to limit the likelihood of entry of disease to the premises;
- (d) disease is being spread or likely to be spread from the premises;
- (e) in the case of an application to renew a licence, the applicant has not kept the records required to be kept under the Act or the regulations.

109 Disclosure of identification information

For the purposes of section 107B(4)(a) of the Act, the following persons are prescribed—

- (a) a person employed for the administration of the NLIS;
- (b) a person registered to be an approved agent under section 248A of the **Duties Act 2000**;
- (c) a member of Council staff within the meaning of the **Local Government Act 1989** responsible for the conduct or facilitation of livestock sales at a saleyard operated or managed by the council;

- (d) a person who operates a saleyard for the purpose of trading livestock or an employee of that person;
- (e) an operator of an abattoir or knackery licensed as a meat processing facility under the **Meat Industry Act 1993** or a corresponding law of the Commonwealth and any employee of an operator nominated by the operator and notified in writing to the Secretary;
- (f) a person authorised under section 9C(1) of the Act to make or sell a tag or a marking, branding or identification device;
- (g) a veterinary practitioner;
- (h) an employee of Dairy Food Safety Victoria established under the **Dairy Act 2000**;
- (i) an employee of PrimeSafe established under the **Meat Industry Act 1993**;
- (j) a person who operates a livestock transport business;
- (k) a person who operates a facility for the testing of the productivity of dairy cows;
- (l) a person who operates a cattle feedlot;
- (m) a person who operates an on-farm quality assurance program that is audited by a third party;
- (n) a person who operates a business scanning approved NLIS devices in Victoria;
- (o) an employee of the Roads Corporation within the meaning of the **Transport Integration Act 2010**;
- (p) a member of staff of a Council within the meaning of the **Local Government Act 1989**;

- (q) a person producing fodder to be sold that is accompanied by a declaration stating the location at which the fodder was grown and its suitability for livestock use;
- (r) a police officer within the meaning of the **Victoria Police Act 2013** or a member of the police force of another State or Territory of the Commonwealth;
- (s) an employee of an approved veterinary diagnostic laboratory;
- (t) the owner of any cattle or class of livestock prescribed by regulation 39 who has been issued with a property identification code;
- (u) a POCTA inspector within the meaning of the **Prevention of Cruelty to Animals Act 1986**.

110 Prescribed Acts

For the purposes of section 107B(4)(b) of the Act, the Acts listed in Schedule 10 are the prescribed Acts.

Part 11—Enforcement

111 Charges incurred in seizing certain livestock

For the purposes of section 120(4) of the Act, payment may be required to be made for the reasonable costs at current market rates of the following charges incurred in connection with the impounding of any livestock or other thing seized under Division 3 of Part 8 of the Act—

- (a) charges incurred in the purchase or hire of materials or equipment used in the seizure and impounding;
- (b) charges incurred in paying the salary of an inspector for the time involved in the seizure and impounding calculated by reference to the hourly rate of pay of the inspector at the time of the seizure, plus an additional 50% of the salary so paid;
- (c) charges incurred in paying fees to persons engaged to assist the inspector in making the seizure or impounding the livestock or other thing;
- (d) charges incurred in keeping, treating and storing the livestock or other thing during the time it was impounded;
- (e) charges incurred in the agistment, storage or maintenance of the livestock or other thing during the time it was impounded.

112 Disposal of abandoned bees, hives or fittings

For the purposes of section 125(1) of the Act an inspector may dispose of neglected or abandoned bees, hives or fittings by—

- (a) in the case of bees, hives or fittings which the inspector believes to be in a badly neglected state, burning or burying them; and

- (b) in the case of bees, hives or fittings which the inspector believes to be in a good or reasonable condition—
 - (i) burning or burying the bees and selling the hives and fittings; or
 - (ii) selling the bees, hives and fittings; or
 - (iii) giving the bees, hives and fittings to a registered beekeeper.

113 Infringement offences against the Act

For the purposes of section 129 of the Act, the prescribed infringement penalty for an offence—

- (a) against section 94A(1), 94A(2), 94B, 95(1), 95A(1), 95B(1) or 96B of the Act is 1 penalty unit;
- (b) against section 6(4), 51(1), 51(2), 52(1), 52(2) of the Act is 2 penalty units;
- (c) against section 9, 9A(1), 9A(2) or 9B(1) of the Act is 3 penalty units;
- (d) against section 9C(1), 9C(2), 48(1) or 115A(4) of the Act is 5 penalty units.

114 Infringement penalties and offences for offences against these Regulations

- (1) For the purposes of section 126(1) of the Act, regulations 84, 85, 86, 87, 92, 94(1), are prescribed.
- (2) For the purposes of section 129 of the Act, the infringement penalty for an offence against regulation 84, 85, 86, 87, 92, 94(1), is 3 penalty units.

SCHEDULES

Schedule 1—REGULATIONS REVOKED

Regulation 4

<i>S.R. No.</i>	<i>Title</i>
172/2006	Livestock Disease Control Regulations 2006
39/2010	Livestock Disease Control Amendment Regulations 2010
129/2012	Livestock Disease Control Amendment Regulations 2012
130/2012	Livestock Disease Control Further Amendment Regulations 2012
145/2016	Livestock Disease Control Amendment Regulations 2016

sch. 2

Schedule 2

Regulation 6

NOTIFICATION OF DISEASES

PART A

Diseases of mammals and birds

Anthrax

PART B

Disease of mammals and birds

Cattle tick

Equine herpes-virus 1 (abortigenic and neurological strains)

Infectious laryngotracheitis

Psittacosis

Pullorum disease (*Salmonella pullorum*)

Swine brucellosis (*B. suis*)

Diseases of bees

American foul brood (*Paenibacillus larvae*)

Braula fly (*Braula coeca*)

PART C

Diseases of mammals and birds

Anaplasmosis

Avian paramyxovirus Type 1

Avian tuberculosis (*Mycobacterium avium*)

Babesiosis

Bovine genital campylobacteriosis

Bovine malignant catarrh

Bovine malignant tumour of the eye larger than 2 cm

Buffalo fly
Caprine arthritis encephalitis
Cysticercus bovis (*Taenia saginata*)
Enzootic bovine leucosis
Equine infectious anaemia
Equine viral arteritis
Infectious bovine rhinotracheitis
Lead poisoning (in food producing livestock)
Leptospirosis
Listeriosis
Mucosal disease
Ovine brucellosis
Ovine footrot
Paratuberculosis (Johne's disease)
Pigeon paramyxovirus Type 1
Salmonellosis
Strangles
Trichomoniasis
Tuberculosis (other than *Mycobacterium bovis*)
Verocytotoxigenic *E. coli*

Diseases of bees

Chalkbrood disease
European foulbrood disease (*Melissococcus plutonius*)
Nosema (*Nosema apis* and *Nosema ceranae*)

Diseases of fin fish

Aeromonas salmonicida (atypical strains)
Epizootic haematopoietic necrosis (EHN virus)
Infection with *Aphanomyces invadans* (epizootic ulcerative syndrome)

Diseases of amphibians

Chytridiomycosis (*Batrachochytrium dendrobatidis*)

Livestock Disease Control Regulations 2017
S.R. No. xx/2017

Sch. 2

Infection with Ranavirus

Diseases of molluscs

Bonamiosis (*Bonamia exitiosus*)

Schedule 3

IDENTIFICATION TAGS AND TATTOOS FOR LIVESTOCK

PART A

Regulation 17(1)

Breeder NLIS ear device for cattle

A breeder NLIS ear device is a plastic device that includes the following visible information:

3ABCD123 XBY

SN

α

Do not remove

Where—

- | | |
|----------|--|
| 3 | is the first character on the property identification code that must be the letter 3 unless the cattle is introduced into Victoria from another State or Territory |
| 3ABCD123 | is the eight character property identification code issued to the cattle owner that identifies the property on which the cattle were born. |
| X | is the manufacturer's code issued by NLIS Limited |
| B | is the tenth character and must be the letter B. |
| Y | is the eleventh character and is the year of supply code issued by NLIS Limited |
| SN | is the five serial number of the tag, with the first of the five characters being either an alpha or numeric character. |
| <i>α</i> | is the NLIS logo |

PART B

Regulation 17(3)

Post breeder NLIS ear device for cattle

The post breeder NLIS ear device for cattle is a plastic device which is denoted with an orange colour with black lettering that contains the following information:

3ABCD123 XBY

SN

α

Where—

- | | |
|----------|--|
| 3 | is the first character on the property identification code that must be the letter 3 unless the cattle is introduced into Victoria from another State or Territory |
| 3ABCD123 | is the eight character property identification code issued to the cattle owner that identifies the property on which the cattle were born. |
| X | is the manufacturer's code issued by NLIS Limited |
| B | is the tenth character and must be the letter E. |
| Y | is the eleventh character and is the year of supply code issued by NLIS Limited |
| SN | is the five serial number of the tag, with the first of the five characters being either an alpha or numeric character. |
| α | is the NLIS logo |

PART C

Regulation 37

Temporary tail tag for cattle

A temporary tail tag for cattle is a plastic tail tag that contains the following information:

V
αβ
SN

Where—

- V** is for Victoria.
- αβ** are letters signifying the district of the inspector or the identity of the selling agent who supplied the tag.
- SN** is the serial number of the tag.

PART D

Regulation 17(2)

NLIS ear tag for cattle to accompany a rumen bolus

An NLIS ear tag for cattle to accompany an NLIS device that is a rumen bolus is a plastic device that contains the following visible information:

3ABCD123 XBY

SN

α

Do not remove

Where—

- 3** is the first character on the property identification code that must be the letter 3 unless the cattle is introduced into Victoria from another State or Territory

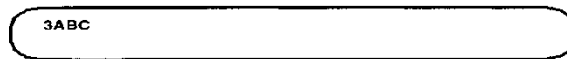
Sch. 3

3ABCD123	is the eight character property identification code issued to the cattle owner that identifies the property on which the cattle were born.
X	is the manufacturer's code issued by NLIS Limited
B	is the tenth character and must be either the letter E where the device is a breeder device or F where the device is a post breeder device.
Y	is the eleventh character and is the year of supply code issued by NLIS Limited
SN	is the five character serial number, with the first of the five characters being either an alpha or numeric character.
α	is the NLIS logo

PART E

Regulation 20

Plastic ear tags for pigs less than 25 kilograms in weight



White tag
Black lettering

Where—

3ABC	is the property identification code identifying the property where the pig was born or kept; or the brand issued to the pig owner from which the property identification code issued to the pig owner that identifies the property on which the pigs were born or are kept can be ascertained.
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PART F

Regulation 20

Tattoo for pigs more than 25 kg in weight

3	A	B	C
----------	----------	----------	----------

Where—

3ABC is the brand issued to the pig owner from which the property identification code issued to the pig owner that identifies the property on which the pigs were born or are kept can be ascertained.

The letters must be at least 20 mm high, 12 mm wide and 2·5 mm apart.

The pins producing the tattoo must be tapered needles at least 6·8 mm long set so that the needles are no more than 2·5 mm between centres.

PART G

Regulation 23

Breeder ear tag for sheep and goats

An NLIS breeder ear tag for sheep or goats is a plastic tag which is not in pink colouring that contains the following visible information:

3ABCD123 X

Where—

3ABCD123 is the property identification code issued to the sheep or goat owner that identifies the property on which the sheep or goats were born.

NABCD123 is the property identification code issued to the interstate sheep or goat owner that identifies the property on which the sheep or goats were born.

X is the NLIS logo.

Note: Regulation 71 sets out additional identification requirements for sheep or goats vaccinated for Johne's disease.

PART H

Regulation 23

Post breeder ear tag for sheep and goats

An NLIS post breeder ear tag for sheep or goats is a plastic tag which is pink in colour that contains the following visible information:

3ABCD123 X

Where—

3ABCD123 is the property identification code issued to the sheep or goat owner that identifies the property on which the sheep or goats are to be kept.

NABCD123 is the property identification code issued to the interstate sheep or goat owner that identifies the property on which the sheep or goats were born or kept.

X is the NLIS logo.

Note: Regulation 71 sets out additional identification requirements for sheep or goats vaccinated for Johne's disease.

PART I

Regulation 24

Breeder NLIS device for sheep and goats

A breeder NLIS device for sheep and goats is a plastic device that is not pink in colour that contains the following visible information:

3ABCD123 XBY

SN

α

Where—

3ABCD123 is the eight character property identification code issued to the sheep or goat owner that identifies the property on which the sheep or goats were born.

X is the manufacturer's code issued by NLIS Limited

- B** is the tenth character and must be either the letter S where the device is for sheep or K where the device is for goats.
- Y** is the eleventh character and is the year of supply code issued by NLIS Limited.
- SN** is the five serial number of the tag, with the first of the five characters being either an alpha or numeric character.
- α** is the NLIS logo

Note: Regulation 71 sets out additional identification requirements for sheep or goats vaccinated for Johne's disease.

PART J

Regulation 24

Post breeder NLIS device for sheep and goats

A post breeder NLIS device for sheep and goats is a plastic device that is pink in colour that contains the following visible information:

3ABCD123 XBY

SN

α

Where—

- 3ABCD123** is the eight character property identification code issued to the sheep or goat owner that identifies the property on which the sheep or goats were kept.
- X** is the manufacturer's code issued by NLIS Limited
- B** is the tenth character and must be either the letter T where the device is for sheep or L where the device is for goats.

Y is the eleventh character and is the year of supply code issued by NLIS Limited

SN is the five serial number of the tag, with the first of the five characters being either an alpha or numeric character.

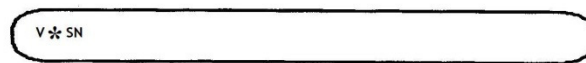
α is the NLIS logo

Note: Regulation 71 sets out additional identification requirements for sheep or goats vaccinated for Johne's disease.

PART K

Regulation 35

Temporary plastic ear tag for pigs less than 25 kilograms in weight



White tag
Black lettering

Where—

V is for Victoria.

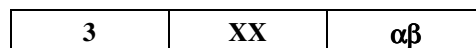
* identifies the region of Victoria where the tag was applied.

SN is the serial number of the tag.

PART L

Regulation 36

Temporary tattoo and brand for pigs over 25 kilograms in weight



Where—

Sch. 3

- V is for Victoria.
- XX identifies the region in Victoria where the tattoo was applied.
- $\alpha\beta$ are letters signifying the location of the inspector who supplied the tattoo brand.

PART M

Regulation 74

Ear tag for cows, goats, sheep and buffalo prohibited from dairying

**MILKING
PROHIBITED**

SN
DO NOT REMOVE

Red tag
Black lettering

Where—

SN is the serial number of the tag.

Schedule 4

Regulations 48 and 53

Livestock Disease Control Act 1994

Livestock Disease Control Regulations 2017

INTRODUCTION OF CATTLE INTO VICTORIA FROM QUEENSLAND, WESTERN AUSTRALIA OR THE NORTHERN TERRITORY

PART A

CERTIFICATION BY OWNER

1. Particulars of Cattle

State of origin of cattle: Livestock district of origin:

Proposed place of entry into Victoria:

Proposed date of entry: / /

2. Category of cattle

	Steers	Bulls	Heifers	Cows	*Calves	Total
Breeding cattle and cattle for feeding or grazing:						
Total number of cattle:						

3. Cattle owner and property details

Name and address of owner of cattle:

Name of agent (if any):

Property or place of origin of cattle:

Property identification number of property of dispatch of cattle:

4. Certification

Livestock Disease Control Regulations 2017
S.R. No. xx/2017

I, [print full name] have inspected the cattle described above on [date] and CERTIFY THAT:

1. The cattle are being consigned to:
[Name of consignee property owner/livestock agent/abattoir]
at:
[Address of consignee property owner/saleyard/abattoir]
2. All the cattle have been identified with an NLIS device in accordance with the Livestock Disease Control Regulations 2017 of Victoria.
3. I believe the cattle are in good health and are free from cattle tick.
- *4. Neither the cattle described above, nor the property of origin of the cattle are under quarantine or restrictions because of disease in the cattle.
- *5. The cattle are from a property under quarantine or subject to restrictions because of disease in the cattle but the Secretary to the Department of Economic Development, Jobs, Transport and Resources (*Victoria*) has given the attached written approval for their introduction.
6. The information furnished on this certificate is, to the best of my knowledge and belief, correct in every particular.

Signature of *owner/*owner's agent on behalf of the owner:

Date: / /

"Calves" means heifers, bulls or steers less than six months of age or at foot

*Strike out alternatives not applicable

PART B
CERTIFICATION BY AUTHORISED OFFICER

I, [Full name]
of [Business address]

being an authorised officer within the meaning of the Livestock Disease Control Regulations 2017 of Victoria, CERTIFY THAT, after due inquiries and to the best of my knowledge and belief, the particulars of the certification made by the owner or the owner's agent on behalf of the owner are correct.

Signature of authorised officer: Stationed at:

Status of authorised officer: Date: / /

- Note 1: Regulation 29(1) requires that the owner of livestock to be introduced into Victoria must forward the certificates in Parts A and B to the Secretary to the Economic Development, Jobs, Transport and Resources (Victoria) within 48 hours after their introduction.
- Note 2: Regulation 30(1) requires that a person introducing cattle into Victoria must ensure that the certificates in Part A and Part B are completed within 14 days before introduction of the cattle.
- Note 3: Regulation 33 requires that cattle introduced into Victoria have been inspected by the person who completes the Part A certificate within 14 days before introduction.
-

Schedule 5

Regulations 48 and 54

Livestock Disease Control Act 1994

Livestock Disease Control Regulations 2017

INTRODUCTION OF PIGS INTO VICTORIA FROM ANY AREA OF WESTERN AUSTRALIA OR QUEENSLAND NORTH OF THE TROPIC OF CAPRICORN OR THE NORTHERN TERRITORY

PART A

CERTIFICATION BY OWNER

1. Particulars of pigs

Number: _____ Breed: _____
Sex: _____ Description: _____
Property identification number of property of dispatch of pigs:
Method of transport:
Proposed place and date of introduction: _____ / _____ / _____

2. Owner/agent particulars

Name and address of owner:

Name of consignee:
Address of consignee:
Name and address of owner's agent (if any):

3. Certification

I, _____ [Print full name]
of _____ [Address]

being the *owner/*owner's agent of the pigs described above
CERTIFY THAT:

1. I have inspected the pigs described above on _____ [date].
2. I believe the pigs to be in good health and not at present under surveillance because of disease.

- *3. The pigs described above are not under restrictions, or from an area under quarantine, because of a disease of pigs.
- *4. The pigs described above are under restrictions because of a disease of pigs or from an area under quarantine because of a disease of pigs but the Secretary to the Economic Development, Jobs, Transport and Resources (*Victoria*) has given the attached written approval for their introduction.
- *5. The herd of origin of the pigs is recognised as being free of swine brucellosis.
- *6. The pigs were blood tested within 30 days before their introduction into Victoria and the test was negative in respect of swine brucellosis and swine brucellosis is not known to exist in the herd of origin.
- 7. The information furnished on this certificate is, to the best of my knowledge and belief, correct in every particular.

Signature of *owner/*owner's agent on behalf of the owner:

Date: / /

*Strike out alternatives not applicable

PART B

CERTIFICATION BY AUTHORISED OFFICER

I, [Full name]

of [Business address]

being an authorised officer within the meaning of the Livestock Disease Control Regulations 2017 of Victoria, CERTIFY THAT, after due inquiry and to the best of my knowledge and belief, the particulars of the certification made by the owner or the owner's agent on behalf of the owner are correct.

Signature of authorised officer: Stationed at:

Status of authorised officer: Date: / /

Note 1: Regulation 29(1) requires that the owner of livestock to be introduced into Victoria must forward the certificates in Parts A and B to the Secretary to the Economic Development, Jobs, Transport and Resources (Victoria) within 48 hours after their introduction.

Note 2: Regulation 30(1) requires that a person introducing pigs into Victoria must ensure that the certificates in Part A and Part B are completed within 14 days before introduction of the pigs.

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Note 3: Regulation 34 requires that pigs introduced into Victoria have been inspected by the person who completes the Part A certificate within 14 days before introduction.

Schedule 6

Regulations 48 and 49

Livestock Disease Control Act 1994

Livestock Disease Control Regulations 2017

INTRODUCTION OF BEES, BEE PRODUCTS, FODDER OR USED BEEKEEPING FITTINGS INTO VICTORIA

PART A

CERTIFICATION BY OWNER

I, [Full name of owner]
of [Postal address]

CERTIFY THAT:

1. I propose to introduce (*kg/*number) of *honey/
*comb honey/*honeycomb/*beeswax/*pollen/*bee colonies/*packaged
bees/*used beekeeping fittings/*queen bees/*escorts/*queen
cells/*other bee products into Victoria* on [date]
TO [Name of consignee]
of [Address of consignee]
- *2. The above bees, bee products, pollen or fittings are not from an apiary
that is located in a quarantine area or in an area in which their
movement is restricted, due to a disease of bees, or from an apiary
showing symptoms of American foul brood disease or from hives
showing field symptoms of another disease of bees.
- *3. The above bees, bee products, pollen or fittings are from an apiary
located in a quarantine area in respect of a disease of bees or subject to
restrictions on movement due to a disease of bees but the Secretary to
the Department of Primary Industries of (Victoria) has given the
attached written approval for their introduction.
- *4. The comb honey is dispatched from Tasmania and has been frozen and
processed in accordance with regulation 35(5A)(a) to (e) and a copy of
the temperature data log accompanies this certificate.
- *5. Pollen used for feeding to bees *has been/*will be irradiated to a
minimum of 15 kilogray *prior to/*immediately after introduction into
Victoria.

Signature of *owner/*owner's agent on behalf of the owner:

Date: / /

*Strike out alternatives not applicable

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PART B

CERTIFICATE BY GOVERNMENT APIARY OFFICER

I, [Full name]
of [Postal address]
being a government apiary officer in [*State/Territory]

CERTIFY THAT:

- *1. After due inquiry I have no reason to doubt the correctness of the certification in Part A.
- *2. There is no evidence of braula fly in the bees, pollen or used beekeeping fittings.

Signature of government apiary officer:

Date: / /

Business address:

*Strike out alternatives not applicable

Schedule 7

Regulations 48 and 49

Livestock Disease Control Act 1994

Livestock Disease Control Regulations 2017

INTRODUCTION OF HONEY, BEESWAX, POLLEN OR USED BEEKEEPING FITTINGS FROM A HIVE AFFECTED BY AMERICAN FOUL BROOD DISEASE INTO VICTORIA

PART A

CERTIFICATION BY OWNER

1. Consignment details

- (a) Quantity of *honey/*beeswax/*pollen to be introduced:
- (b) *Number and description of used beekeeping fittings to be introduced:
- (c) Present location of honey, beeswax, pollen or fittings:
- (d) Owner of apiary of origin of honey, beeswax, pollen or fittings:

2. Certification

I, [Full name of owner]
of [Postal address]

being the *owner/*owner's agent of the *honey/*beeswax/*pollen/*used
beekeeping fittings from hives affected by American foul brood disease
described above to be introduced into the State of Victoria from any other
State or Territory of the Commonwealth

CERTIFY THAT—

- *1. The quantity of *extracted honey/*beeswax specified above is to be
forwarded direct to the processing plant approved by the Secretary to
the Department of Primary Industries located at:

[Address]

in Victoria.

- *2. The *pollen/*used beekeeping fittings will be sufficiently irradiated by
gamma radiation at a plant approved by the Secretary located at:

[Address]

in Victoria.

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- *3. The proposed date of consignment of the *honey/*beeswax/*pollen/
*used beekeeping fittings to the above named plant is [Date]
4. The method of transport will be [insert method]
- *5. The containers (except for containers placed inside a larger container)
of the *extracted honey/*beeswax/*pollen/*used beekeeping fittings
have been labelled with weather-proof labels setting out the name of the
owner of the apiary of origin or the owner's agent and a contact number
of an inspector in Victoria and the words "American foul brood
diseased material which is highly infectious to honey bees. In the event
of an accident contact an apiary inspector appointed under the
Livestock Disease Act 1994 as soon as possible."
- *6. The *pollen/*used beekeeping fittings described above have been
sufficiently irradiated by gamma radiation before introduction into
Victoria and are consigned to:

[Name of consignee]

[Address of consignee]

Signature of *owner/*owner's agent on behalf of the owner:

Date: / /

**Strike out alternatives not applicable*

PART B

CERTIFICATE BY GOVERNMENT APIARY OFFICER

I, [Full name of apiary officer]

of [Address]

being a government apiary officer, of the Department of

[Name of Department/Government Agency]

in [State or Territory]

CERTIFY THAT:

1. the processing plant in Victoria is approved by the Secretary for the receipt of the *honey/*beeswax/*pollen/*used beekeeping fittings.
2. After due inquiry I have no reason to doubt the correctness of the certification in Part A.

Signature of government apiary officer:

Date / /

**Strike out alternatives not applicable*

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Note 1:

Schedule 8

Regulation 76

Livestock Disease Control Act 1994

Livestock Disease Control Regulations 2017

NOTICE OF DISPOSAL OF HIVES

I, [Print full name]

of [Print address]

Registration No.:

GIVE NOTICE that I have disposed of [Number] hives, formerly my property

To: [Full name of new owner(s)]

of: [Address of new owner(s)]

New owner's registration No.:

I now own hives.

Signed: [Disposer's signature] Dated: / /

Schedule 9

Regulation 78

Livestock Disease Control Act 1994

Livestock Disease Control Regulations 2017

CERTIFICATION AND STATEMENT OF STOCK HEALTH ON LICENSED SEMEN COLLECTION PREMISES

PART A

CERTIFICATION BY VETERINARY PRACTITIONER

I, *[name of veterinary practitioner]* being a veterinary practitioner within the meaning of the Livestock Disease Control Regulations 2017, whose signature appears below,

in respect of the premises: *[name of premises if any]*

being premises located at *[address of premises]*

CERTIFY:

1. that I have, within the preceding 14 days, examined all livestock on the premises and found them to be free from evidence of infectious and contagious disease;
2. that during the past 12 months, no evidence of infectious disease has been observed in the breeding sires on the premises or in livestock bred there from those sires with the following exceptions

Sire	Disease observed	Number of progeny affected
------	------------------	----------------------------

(attach a separate sheet if insufficient space)

3. that, during the 12 months ending on 31 December, no sires have been used for collection of semen for sale on the premises unless approved by the Secretary under section 55 of the **Livestock Disease Control Act 1994**;

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4. that all livestock on the premises have been re-tested with negative results, or where applicable treated in accordance with the conditions of the licence with the exception of the following animals, for the reasons stated

Animal	Test required	Reason for the exception
--------	---------------	--------------------------

[attach a separate sheet if insufficient space]

Signed: _____ [Veterinary Practitioner] Date / /

PART B

STATEMENT OF LICENSEE

I, _____ [name of licensee] being the licensee of the premises _____ [name of premises] located at _____ [address of premises] state that to the best of my knowledge and belief, the statements made by the veterinary practitioner in Part A of this Schedule are true and correct.

Signed: _____ Date / /

Schedule 10

Regulation 110

PRESCRIBED ACTS OF THE COMMONWEALTH AND STATES AND TERRITORIES OF THE COMMONWEALTH

Acts of Victoria

Environment Protection Act 1970
Drugs Poisons and Controlled Substances Act 1981
Food Act 1984
Wildlife Act 1975

Acts of the Commonwealth

Agricultural and Veterinary Chemicals Act 1994
Export Control Act 1982
Biosecurity Act 2015

Acts of the State of New South Wales

Animal Diseases and Animal Pests (Emergency Outbreaks) Act 1991

Apiaries Act 1985
Biosecurity Act 2015
Fisheries Management Act 1994
Pesticides Act 1999
Stock Diseases Act 1923
Stock Medicines Act 1989

Acts of the State of South Australia

Agricultural and Veterinary Chemicals (South Australia)
Act 1994
Agricultural and Veterinary Products (Control of Use)
Act 2002
Fisheries Management Act 2007

Sch. 10

Livestock Act 1997

Acts of the State of Queensland

Agricultural and Veterinary Chemicals (Queensland)
Act 1994

Agricultural Chemicals Distribution Control Act 1966

Biosecurity Act 2014

Chemical Usage (Agricultural and Veterinary) Control
Act 1988

Fisheries Act 1994

Acts of the State of Tasmania

Agricultural and Veterinary Chemicals (Tasmania)
Act 1994

Animal (Brands and Movement) Act 1984

Animal Health Act 1995

Acts of the State of Western Australia

Aerial Spraying Control Act 1966

Agriculture and Related Resources Protection Act 1976

Agricultural and Veterinary Chemicals (Western Australia)
Act 1995

Biosecurity and Agriculture Management Act 2007

Exotic Diseases of Animals Act 1993

Dangerous Goods Safety Act 2004

Health (Miscellaneous Provisions) Act 1911

Veterinary Chemical Control and Animal Feeding Stuffs
Act 1976

Acts of the Northern Territory

Agricultural and Veterinary Chemicals (Northern Territory)
Act

Fisheries Act

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Medicines, Poisons and Therapeutic Goods Act

Livestock Act

Territory Parks and Wildlife Conservation Act

Acts of the Australian Capital Territory

Animal Diseases Act 2005

Stock Act 2005

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Table of Applied, Adopted or Incorporated Matter

Note that the following table of applied, adopted or incorporated matter is included in accordance with the requirements of regulation 5 of the Subordinate Legislation Regulations 2014.

Statutory Rule Provision	Title of applied, adopted or incorporated document	Matter in applied, adopted or incorporated document
Regulation 5 Definition of <i>ANZSDP</i> , Regulation 59(2)(a)	The list of Australian and New Zealand Standard diagnostic procedures for use in Australian veterinary laboratories, published on 8 December 2016 by the Commonwealth Department of Agriculture and Water Resources on its Internet site.	The whole
Regulation 5 Definition of <i>ASDT</i> , Regulation 59(b)	The list of Australian standard diagnostic techniques published in 1993 by the Commonwealth Department of Agriculture and Water Resources on its Internet site as published or amended from time to time	The whole
Regulation 5 Definition of ASISO/IEC 17025-1999, Regulation 59(2)	Australian Standard AS ISO/IEC 17025—2005 “General requirements for the competence of testing and calibration laboratories” Second Edition published in 2005 by Standards Australia.	the whole
Regulation 5 Definition of Newcastle Disease Management Plan, Regulation 62(4)(b)	National Newcastle Disease Management Plan 2013-2016 Version 1.7 published on 29 July 2013 by the Australian Animal Health Council Ltd..	The whole

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Appendix C Current NLIS Pig Traceability Standards

NLIS Pig Standards

Version 6 – 14 June 2016

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Introduction

Purpose

The purpose of this document is to specify minimum standards that, if adhered to, will ensure the traceability of pigs for disease control and food safety purposes.

These rules have been developed collaboratively between industry and government and form the basis for the introduction of harmonised legislation in each jurisdiction to support and achieve consistent identification and traceability outcomes and the adoption of codes of best practice by industry. The standards also represent minimum mandatory requirements needed to ensure compliance with the National Livestock Traceability Performance Standards and the Primary Production and Processing Standard for Meat and Meat Products. These minimum standards support the harmonisation in legislation across jurisdictions. It is recognised that State/Territory legislation may impose more demanding requirements. Industry participants need to comply with relevant legislation in the jurisdiction in which they operate.

It is expected that these minimum standards will be progressively adopted by industry production assurance programs, and that program participants will be subject to periodic audits in relation to their compliance with these standards.

Scope

These standards apply to:

- 1) All pigs and their movements in Australia.
- 2) Those personnel responsible for the care and management of the movements of pigs from or to farms, saleyards, artificial breeding centres, veterinarians, Agents' Property Identification Codes (PICs), transport vehicles, knackeries and processing establishments and agricultural show societies or any other movement between locations with a different PIC.

Interpretation

Each numbered section or part of the document covers a particular responsible person and contains the following information:

- Scope – who the section or part applies to.
- Objective – the intended outcome(s) for each section of the standards.
- Standards – the minimum pig identification and traceability requirements designated in this document which are the minimum requirements that must be met under state and territory law for pig identification and traceability.
- The standards are:
 - intended to be clear, essential and verifiable statements. Standards use the word 'must'.
 - numbered with the prefix 'S'.
- Notes – explanations of the context of the standards.
- Definitions – are described in the glossary.
- Further details on pig identification and traceability standards can be found in other industry and state and territory government publications.

Some standards describe the required identification and traceability outcome without prescribing the exact actions that must be done.

NLIS (Pig) Standards

Note that:

- Note the use of 'a person' or 'a person in charge' in the standards. 'A person' means more than one person (plural) and not just a specific person. Use of 'a person in charge' is appropriate where responsibility is shared and may extend along a hierarchy of management.

Principles of Pig Identification and Traceability

The rapid traceability of pigs is critical in order to:

- *Facilitate swift responses by industry and authorities in the event of emergency animal disease outbreaks –*
The spread of infectious animal disease is primarily by the movement of infected pigs and often disease is first detected at a distance from where the pigs were infected. Delay in determining the identification and origins of pigs, their cohorts and at-risk contacts threatens to delay an emergency disease response, with potentially devastating impacts particularly for highly infectious diseases like foot and mouth disease.
- *Maintaining national and international market access –*
Minimum livestock identification and traceability standards are set for global trade by the World Organisation for Animal Health (the OIE), and it is these that must be met as a minimum to ensure that Australian pigs and pig products can continue to be traded internationally.
- *Underpinning food security, safety and public health –*
Pigs may be contaminated with residues or infectious agents that pose a risk to other animals and humans. To protect these, it is critical to be able to identify pigs and their movement history.

This ability to determine where a pig has been from the point of enquiry back to the property of birth is termed 'lifetime traceability'.

Property Identification and Registration

Individual properties and enterprises are identified by PICs to which are attached contact details of the pig owners and managers.

Mob-based Pig Identification

Pig movements are based on mobs rather than individual animal identification. All animals in a mob are identified on the basis of the last property of residence, through either National Livestock Identification System (NLIS) approved devices (e.g. ear tags) or registered brands, which are both linked to the PIC of that property. The devices and brands are approved under state legislation. This means that any time a pig moves, it will have a new device or brand applied.

A mob can refer to a single animal if moving with visual identification (not individual electronic identification).

Note that:

- Where 'NLIS approved device' is mentioned, it implies any identifier approved by NLIS Ltd for the identification of pigs. This may include visual and electronic ear tags or any other type of identifier approved into the future.

NLIS (Pig) Standards

Movement Information

There are critical details that need to be recorded when pigs are moved, including the PIC from which the pigs were dispatched, the date of dispatch, the numbers and description of pigs being dispatched, the serial number of the movement document that accompanies the pigs, the name and signature of the person completing the document and date it was made, and the intended destination of the pigs.

Central Database

All movement information is recorded on a central database (i.e. the NLIS database via the PigPass database) which links the mob of animals involved in the movement between properties. It is through interrogation of the NLIS database that animal movements between properties can be traced.

FINAL

NLIS (Pig) Standards

Part 1: Producers

Scope

This Part of these Standards applies to:

- 1) persons owning and/or managing a property upon which pigs are bred, agisted, reared or kept
- 2) persons owning and/or managing pigs moving off or onto a property at any point of the animals' life for any reason.

Note that:

- The above includes: artificial breeding centres, the premises of veterinary practitioners and farms. It also includes pigs kept as pets by lifestyle farmers irrespective of whether the owner or manager has an Australian Business Number or is registered as a 'primary producer' with the Australian Taxation Office.

Objective

To ensure that pigs are correctly identified with an NLIS approved device or brand prior to movement and that their movement between properties can be traced effectively and rapidly.

Standards incorporated into the new Regulations – Ss1.2.2, 1.2.3, 1.2.4, 1.2.5, 1.3.2, 1.3.3, 1.3.4, 1.3.5, 1.3.6, 1.3.8, 1.4.2, 1.4.3, 1.4.5, 1.4.6, 1.4.7

Standards

S1.1 Property Identification

S1.1.1

All persons owning or managing a property upon which pigs are or will be kept must obtain and hold a valid PIC registered for that property from their state animal health authority. This includes farms, saleyards, showgrounds, abattoirs, knackereries and any other property where pigs may be kept.

S1.1.2

Changes to the following details relating to a PIC must be notified to the state animal health authority within 14 days:

- a) Owner contact details including name, address and contact phone number
- b) Manager contact details including name, address and contact phone number
- c) Changes to property boundaries involving their expansion through acquisition agreement, or their reduction through sale or otherwise.

S1.1.3

In some jurisdictions, parcels of land do not have to be adjacent to utilise the same PIC, however each parcel of land on which a pig resides or is held must be covered by a PIC assigned by the relevant state or territory authority.

NLIS (Pig) Standards

S1.2 Pig Identification Devices and Brands

There are two methods of identification permitted for movement purposes in respect to this Standard:

- Brands prescribed by the state or territory authorities and
- NLIS approved devices (breeder and post-breeder).

S1.2.1

NLIS approved breeder devices must only be placed in the pig's left ear and NLIS approved post-breeder devices must only be placed in the pig's right ear.

S1.2.2

By no later than the time of their departure:

- a) All pigs born on a property must, before being dispatched from the property of birth, be either:
 - 1) branded on the left shoulder with a state or territory authority prescribed brand assigned for use on that property or
 - 2) tagged in the pig's left ear with a yellow 'breeder' NLIS approved device assigned for use on that property.
- b) All introduced pigs and those of unknown or uncertain origin, before being dispatched from the property, be either:
 - 1) branded on the right shoulder with a state or territory authority prescribed brand assigned for use on that property or
 - 2) tagged in the pig's right ear with an orange 'post-breeder' NLIS approved device assigned for use on that property.

Note that:

- All NLIS approved devices and brands must comply with the NLIS Pig Standard for visual identifiers.
- Piglets that have not been weaned and are moving with their mother are exempt from approved identification.

S1.2.3

Brands must:

- a) comply with the state or territory legislation for pig brand size and composition
- b) be directly linked to the PIC of the property being moved from
- c) be applied using only tattoo ink or paste approved for that use
- d) be applied as per the manufacturers' instructions.

NLIS (Pig) Standards

S1.2.4

Brands must be applied as a body tattoo prior to movement but should not be used on pigs under 25 kg live weight. Only NLIS approved devices should be used on pigs under 25-kg live weight.

S1.2.5

The prescribed brand must be applied to pigs residing on the property of birth on their left shoulder.

S1.2.6

Subsequent transaction brands must be applied firstly to the right shoulder, secondly to the right rump and thirdly to the left rump.

Note that:

- An NLIS approved device or brand is required each time a pig moves from a property, unless the pigs are moved under a QA program (approved by the state/territory authority) and ownership doesn't change. Therefore, pigs moving between multiple properties will, over their lifetime, obtain multiple NLIS approved devices and/or brands.

S1.3 Pig Identification

Pigs on the property

S1.3.1

If a pig loses its NLIS approved device whilst on the property it must be replaced according to S1.2.2.

S1.3.2

NLIS approved devices are issued for use on individual properties (PICs) and must not be applied to pigs on properties with a different PIC unless approved in writing to do so by the relevant state or territory authority.

Pigs moving off the property

S1.3.3

All pigs leaving the property (PIC) must be individually identified with an NLIS approved device or a properly applied brand before moving off the property.

S1.3.4

Where pigs are moved to another PIC and ownership does not change, (excluding movements to shows/events and saleyards) such movements will not require identification or to be accompanied by a movement document provided traceability back to the last property of residence is maintained on the database and the property has an approved QA program (such as APIQ) and these movements are reported to the database within two working days.

Note that:

- Some states/territories may require alternative identification and movement requirements. Please check with your state animal health authority to ensure you are compliant.

NLIS (Pig) Standards

S1.3.5

Where pigs cannot be safely tagged or branded on a property prior to dispatch, or emergency tags or a brand cannot be obtained within the required timeframe, the person in charge can make application for permission (Permit) from the relevant state or territory animal health authority to dispatch them, and must comply with all terms and conditions of the permit if granted.

S1.3.6

In instances of extreme emergency, such as imminent threat from bushfire or floods, pigs may be moved without being tagged or branded but this must be recorded in an auditable paper trail of records, which must as a minimum record the details set out in S1.4.1 and S1.4.2, with the state animal health authority notified and provided with that information within seven days. The pigs may be returned directly to their property of origin unidentified, however pigs must be identified and accompanied by a movement document if they are sold, moved again from the property resided at during the emergency, or sent for slaughter.

S1.3.7

Unweaned piglets when moving with their mother from the property of birth do not require tagging or branding. They must be accompanied by a fully completed movement document (noting exemption in S1.3.4), and must be included in the database transfer.

Note that:

- Pigs with NLIS approved electronic RFID devices applied on one property that subsequently move to another property will still require an NLIS approved breeder or post-breeder device or brand to be applied before moving off that property unless the database is updated with the details of that electronic RFID device and the new PIC of residence.
- Permits may be issued by the state or territory animal health authority to move unidentified pigs where required. An application is required before consideration will be given by the state or territory authority.
- Uploading of property to property movement information to a relevant database (presently only two relevant databases - PigPass or NLIS) is the responsibility of the owner/receiver of the pigs at the destination.
- The owner/receiver of the pigs at the destination property must ensure that lawfully unidentified (permit issued) pigs are recorded as moving onto the destination property in PigPass within two days and that the pigs are identified correctly before they next move.

NLIS (Pig) Standards

Pigs moving onto the property

S1.3.8

After arrival on a property where the pigs have arrived directly from another PIC (other than a saleyard), the owner/receiver must:

- 1) record the movement on the database within two working days and
- 2) provide all of the relevant movement information as described in S1.4.2; or
- 3) take active steps to ensure or confirm the movement has been recorded, for example by an agent or third party if such parties have agreed to undertake the recording on the owner's behalf.

Note that:

- The following information must be uploaded to the database:
 - a) Date of movement
 - b) The origin (from) PIC
 - c) Destination PIC
 - d) Number of pigs
 - e) Movement document serial number
 - f) Whether the stock have been bred on the PIC of consignment, and if not, the period of time they resided on the property of consignment.

S1.4 Movement Information and Documents

S1.4.1

One of the following movement documents must accompany the movement of pigs off a property and be provided to the receiver of the pigs:

- a) PigPass National Vendor Declaration (NVD) with the elements under S1.4.2 completed; or
- b) An alternative document approved in the jurisdiction (e.g. waybill) containing the required movement information and with the elements under S1.4.2 completed.

Note that:

- The PigPass NVD is the industry's preferred approved movement document and may be used for all pig movements.

S1.4.2

The minimum movement information (the 'movement information') that must be recorded on the movement document for all pig movements is the:

- a) Name or Trading name of owner of pigs
- b) PIC that identifies the property from which the pigs were dispatched and physical address of where the journey commenced
- c) Tattoo/brand number linked to the origin PIC (if brand is used to identify pigs in the consignment)
- d) Date and time of dispatch of the pigs
- e) Number and description of pigs dispatched

NLIS (Pig) Standards

- f) Whether the pigs have been bred by the vendor and, if not, the period of time the pigs have resided on the property.
- g) Name, address, phone number, and signature of the consignor/person completing the document
- h) intended destination PIC of the pigs (if a PIC is not available then include the destination property/place location)

Pigs moving off the property

S1.4.3

The documentation ('movement documents') that must accompany the movement of pigs off a property and be provided to the receiver of the pigs at the time or before their arrival is a:

- a) PigPass National Vendor Declaration with the elements in S1.4.2 legible and fully and accurately completed
- b) Alternative document approved by the jurisdiction (e.g. waybill) containing the required movement information
- c) The state or territory animal health authority permit if the pigs are not identified with an NLIS approved device or brand and
- d) Any state specific required documentation such as a health certificate unless
- e) Pigs are being moved in accordance with S1.3.4 or the elements in S1.3.5, S1.3.6 and S1.3.7 are met.

Note that:

- In the case of pigs leaving a saleyard, movement documents may accompany (as per state legislation) the pigs in transport or be sent separately as long as it is received prior to arrival at the destination property, or abattoir in the case of slaughter pigs.

Pigs moving onto the property

S1.4.4

The buyer/receiver of pigs, at the time of purchase or before the end of the day of sale, must provide the seller or selling agent with the destination PIC.

Records

S1.4.5

Copies of movement documents must be kept for three years by the vendor and purchaser of the pigs.

S1.4.6

The movement information must be confirmed as uploaded to the database by the owner/receiver of the pigs at the destination or by the saleyard or abattoir operator as applicable within two days of the pigs' arrival on the property, including for pigs arriving untagged or under permit.

NLIS (Pig) Standards

S1.4.7

The person uploading the information to the database must ensure that only correct and accurate information is uploaded to the database.

Note that:

- Movement documents may be uploaded with the movement information as images to the database, and provided they are legible, will comply with the requirement to keep records for three years. This is a preferred option for the storage of movement documents.

S1.5 Managing Supply Chain Risks

S1.5.1

It is the responsibility of the owner or person responsible for the husbandry of the pigs, when dispatching pigs from their PIC, to accurately complete the accompanying movement document.

S1.5.2

It is the responsibility of the owner or person responsible for the husbandry of pigs to ensure that the pigs being dispatched are 'fit for purpose' and are not subject to food safety, welfare, biosecurity or product integrity regulatory restrictions.

Part 2: Transporters

Scope

This Part of these Standards applies to:

- 1) persons or businesses transporting pigs between properties, saleyards and processing establishments and knackeries, veterinary and artificial breeding centres and agricultural shows and events for any reason or purpose.

Objective

To ensure that pigs are correctly identified and that their movement between properties can be traced effectively and rapidly.

Standards incorporated into the new Regulations – Ss2.1.1, 2.2.2

Standards

S2.1 Transported Pig Identification

S2.1.1

A person should only transport pigs that are identified in accordance with S1.3, unless the movement is:

- a) in accordance with the conditions of a permit issued by the relevant state animal health authority(s) and the transporter has a valid copy of the permit
or
- b) in the case of extreme emergencies, such as the imminent threat of bushfire or flood.

S2.2 Movement Documentation

S2.2.1

Unless exempted in accordance with S1.3.4 to S1.3.7, the person transporting pigs should ensure all pigs are accompanied by an approved movement document prior to departure, i.e. PigPass NVD or alternative state animal health authority approved movement document (e.g. waybill), which must be delivered to the person receiving the pigs.

S2.2.2

The person transporting pigs should complete and sign sections of approved movement documents that relate to transporters in the transport section of the document.

Part 3: Livestock Agents

Scope

This Part of the Standards applies to:

- 1) persons working as livestock agents involved in the preparation and presentation for sale and purchase of pigs when they are moving between properties, including properties, saleyards and processors such as abattoirs and knackereries.

Objective

To ensure that pigs are correctly identified with an NLIS approved device or brand before movement, and that their movement between saleyards and properties, including artificial breeding centres, processing establishments and knackereries, can be traced effectively and rapidly.

Standards incorporated into the new Regulations – Ss3.1.3, 3.2.1, 3.2.7, 3.3.3, 3.4.1

S3.1 Pig Identification Devices and Brands

There are two methods of identification permitted for movement purposes in respect to this Standard:

- a) NLIS approved devices (e.g. ear tags)
or
- b) Brands prescribed by state or territory animal health authorities.

S3.1.1

NLIS approved breeder devices must only be placed in the pig's left ear and brands applied to the left shoulder of the pig when on or leaving the property of birth.

Brands of subsequent properties should be applied in order of availability, to right shoulder, right rump, and left rump (in stated order).

NLIS post-breeder devices must only be placed in the pig's right ear.

S3.1.2

Brands must be applied using only tattoo ink or paste approved for that use.

S3.1.3

Brands must be applied as a body tattoo prior to movement but should not be used on pigs under 25 kg live weight. NLIS approved devices should be applied to pigs under 25 kg live weight.

S3.1.4

Brands (tattoos) must be applied as per the manufacturers' instructions and be legible at slaughter.

S3.2 Identification of Pigs Presented For Sale at a Public Auction Sale

S3.2.1

NLIS (Pig) Standards

A person must only present for auction sale or sell pigs that are correctly identified with either an NLIS approved device or brand that relates to the most recent property of residence.

S3.2.2

Pigs must be visually checked by the selling agent or their representative to verify the presence of an NLIS approved device or brand, before being presented for sale at saleyards, and on-farm or online auctions.

S3.2.3

Pigs with missing or incorrect identification as determined by S3.2.2 or pigs moved under permit of the state or territory authority to a saleyard must, prior to leaving the saleyard be either:

- a) tagged in the right ear with an orange saleyard 'emergency post-breeder' NLIS approved device assigned for use at that saleyard or
- b) branded with the special crown brand (tattoo) assigned to the saleyard on the next appropriate position, by the selling agent or their representative in accordance with the requirements of Section 1.2 of this document.

Note that:

- state or territory animal health authorities may issue permits for non-NLIS identified pigs to move off the property, for example where inadequate facilities exist to safely tag/brand the pig(s), to a saleyard (other than on an auction sale day) where suitable facilities exist.

S3.2.4

The saleyard operator must keep auditable records of the use of saleyard emergency post-breeder tags or special crown brands (tattoos) for at least three years, including as a minimum:

- details of the tag PIC and serial number or Crown brand/tattoo description
- date applied
- vendor PIC
- the number of pigs for each property to which the emergency tag or Crown brand was applied
- the name and address of the person applying the emergency tag or Crown brand
- movement document serial number (where supplied).

Note that:

- the buyer is required by S1.4.4 to provide the selling agent with their PIC at the time of purchase.
- where the buyer is a livestock agent and is uncertain of the destination PIC, the agent may provide their Agents' PIC to the saleyard if they have one, but

NLIS (Pig) Standards

then are required to transfer the pigs, to the correct destination PIC, on the NLIS database within two days or before slaughter, as per S1.4.6.

S3.2.5

The serial number on emergency tags and Crown brand descriptions must be recorded against the PIC of consignment and included in both the database upload and post-sale documentation provided to buyers/receivers as per S3.3.2.

S3.2.6

A person must only dispatch an animal from a saleyard that is correctly identified with an NLIS approved device or brand.

S3.2.7

Where a public auction sale occurs involving a selling agent as the 'saleyard operator' (e.g. on-farm auction, agent owned saleyard, showground, etc.), the responsibility to upload the movement information to the database lies with the selling agent, and must be completed within two working days of the sale or before slaughter.
This could be an on-farm sale or interfaced with electronic sales method (e.g. AuctionsPlus).

S3.3 Post-sale Movement Information and Documentation

S3.3.1

The saleyard operator must ensure a completed movement document (see S1.4.1 for details) has been provided by the vendor/consignor before presentation for sale.

S3.3.2

A summary (see S1.4.1 and S4.5.1 for details) must be provided to the purchaser by the saleyard operator in a public auction within the nominated time period.

S3.3.3

Copies of movement documents must be kept by selling agents for three years.

S3.4 Records

S3.4.1

The agent must reconcile the numbers of head linked to their Agent's PIC on the database and move them off that Agent PIC to the actual destination PIC within two days.

S3.5 Managing Supply Chain Risks

S3.5.1

NLIS (Pig) Standards

Where pigs have a food safety, biosecurity or market eligibility status derived from the movement document and/or the database, the agent will inform the buyers by presale catalogue and/or announce the status prior to the offering of those lots.

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Part 4: Saleyard Operators

Scope

This Part of these Standards applies to:

- 1) persons operating, or employed in pig saleyards, scales (mobile or fixed) and any other location where pigs are offered for public sale or auction (including on-farm and showgrounds) but excluding on-line sales.

Objective

To ensure that all pigs are correctly identified, buyers are provided with pre- and post-sale information and all pigs moved into and out of saleyards are recorded on the database to enable the movement of pigs out of the saleyards to be traced quickly and efficiently.

Standards incorporated into the new Regulations – Ss4.2.2, 4.2.3, 4.3.1, 4.3.2, 4.3.3, 4.4.1, 4.4.2, 4.4.3, 4.5.1, 4.5.2, 4.5.3, 4.5.4

Standards

S4.1 Property Identification

S4.1.1

All persons operating a pig saleyard must obtain and hold an active PIC relating to that business from their state or territory authority.

S4.2 Pig Identification Devices and Brands

Saleyard operators must only use NLIS approved devices with a unique serial number included on the device or crown brand as the only method of identification permitted for movement purposes from saleyards in respect to this Standard.

S4.2.1

Emergency NLIS approved devices (orange post-breeder tags) must only be placed in the pig's right ear. Special crown brands should be on the right shoulder or rump.

S4.2.2

NLIS approved devices must not be re-used, or removed, unless under a permit issued by the state or territory authority, or under the direction of one of its officers.

S4.2.3

Saleyard emergency NLIS approved devices or brands are issued to an individual saleyard and must not be applied to pigs on properties with a different PIC (including saleyards) unless approved in writing to do so by the relevant state animal health authority.

S4.3 Pig Sales

S4.3.1

NLIS (Pig) Standards

A person must only present for auction or sell pigs that are correctly identified with an NLIS approved device or brand, in accordance with these standards.

S4.3.2

A person must only dispatch pigs from a saleyard or sale that are identified with an NLIS approved device or brand, except where an identifier has not been applied as per S1.3.4, S1.3.5, S1.3.6 and S1.3.7.

S4.3.3

The saleyard operator or their representative (e.g. selling agent) must keep auditable records of the use of saleyard post-breeder tags for at least three years, ensuring that the relationship between the identifier, the PIC of origin and movement document (e.g. PigPass NVD) is maintained, and including as a minimum the device's PIC and serial number, date applied, the saleyard PIC, destination PIC, and the name and address of person consigning the pigs.

S4.4 Database Notification

S4.4.1

The saleyard operator must upload the following information about each consignment, provided by the agent or vendor to a database:

- a) Date of sale
- b) The origin (consignment) PIC
- c) Destination PIC
- d) The number of pigs in the consignment that die in transit to or before dispatch from the saleyard, recorded as using 'Deceased' as a default (8 character) destination PIC
- e) Total number of pigs in the consignment
- f) Movement document (e.g. PigPass NVD) serial number (where provided)
- g) Whether the stock have been bred on the PIC of consignment, and if not, the period of time they resided on the property of consignment
- h) The saleyard PIC, or other unique identifier registered to the NLIS database and linked to the saleyard PIC
- i) If an emergency saleyard device or emergency Crown brand is applied, the sequential serial number must also be uploaded.

S4.4.2

The uploading of movement information as required under S.4.4.1 must be:

- a) In the case of sales where pigs are not sold/purchased for direct slaughter, the information must be uploaded to the database by the saleyard operator by the close of business of the next working day.
- b) In sales where pigs are purchased for slaughter, the movement information must be completed and uploaded to the database by the end of the day of sale (i.e. midnight) or before slaughter, whichever is sooner.

NLIS (Pig) Standards

- c) Where a sale does not occur, for example when stock are 'passed in' or are in transit through the saleyard, the movement information must still be uploaded to the database by COB next working day.

Note that:

- More stringent, individual arrangements with processors may be determined on a case by case basis if the information is required sooner.

S4.4.3

The saleyard operator must take steps to confirm that the uploaded information has been received by the database and undertake corrective action for all error messages received from the database within three working days.

S4.5 Provision of Documentation to Buyers.

The saleyard operator must provide all buyers with information about the origin of pigs they purchase to enable them to meet their regulatory requirements in relation to traceability and food safety.

S4.5.1

Post-sale documentation for slaughter pigs must be provided by close of business on the day of sale or before the pigs are slaughtered – whichever occurs first. For all other pigs, the documentation must be provided within two days of sale.

S4.5.2

Post-sale documentation need not accompany the stock during delivery as long as the information is forwarded to the buyer separately via fax, email or post within the required timeframes.

S4.5.3

Accepted formats for post-sale documentation include:

- a) Buyer Reconciliation Report or Post-Sale Summary. Such documents contain all of the critical information supplied on the PigPass NVD that is required (by processing establishments in particular), provided the original NVDs are accessible
- b) Copies of individual vendor NVDs or waybills
- c) Scanned image of original NVD uploaded to the database.

S4.5.4

Post Sale Summaries or Buyer Reconciliation reports must include:

- a) Place where sale occurred
- b) Date of sale
- c) Name of saleyard operator
- d) Saleyard phone number
- e) Saleyard email address

NLIS (Pig) Standards

- f) Source PICs and brands represented in the mob
- g) Number of pigs from each source property
- h) Movement document serial number from each source property where provided
- i) Whether the pigs were bred on each of the source PICs, and if not, the period of time the pigs resided on the source property.
- j) Serial numbers of emergency saleyard tags or details of emergency crown brands applied.

S4.6 Records

S4.6.1

The saleyard operator must reconcile the numbers of animals linked to its PIC on the database with the number remaining on the premises after each sale.

S4.7 Managing Supply Chain Risks

S4.7.1

Where pigs have a food safety, biosecurity or market eligibility status derived from the movement document and/or the database, the saleyard operator will inform the buyers via the post-sale summary prior to the pigs leaving the saleyard.

Part 5: Processors (Abattoirs and Knackeries)

Scope

This Part of these standards applies to:

- 1) persons owning, operating, or employed in processing of pigs and their carcasses, including processing establishments and knackeries.

Objective

To ensure that pigs are correctly identified and that their movement to a processing facility can be traced effectively and rapidly, and that all pigs processed are recorded on a database.

Standards incorporated into the new Regulations – Ss5.2.2, 5.2.3, 5.2.9, 5.3.1, 5.3.2

Standards

S5.1 Property Identification

S5.1.1

All persons owning or operating a processing business that processes pigs and/or their carcasses must have an active PIC relating to that business from their state or territory authority. That PIC must be provided to the seller, selling agent or saleyard operator at the time of purchase.

S5.2 Pig Identification Devices and Brands

NLIS approved devices or brands are the only method of identification permitted for movement purposes in respect to this Standard.

S5.2.1

Pigs must be kept in mobs according to their PIC of consignment (or consigning saleyard) in the holding yards, and processors must have documented systems for managing unidentified pigs or pigs with absent or incomplete documentation.

S5.2.2

Pigs must not be slaughtered or processed unless they are identified by an NLIS approved device or brand, except:

- a) where pigs have been deemed to be dangerous or unsafe to tag and are moved under a state or territory authority permit, provided the conditions of that permit are met and the pig is slaughtered at an abattoir or knackery
or
- b) under the direction of the state or territory animal health authority, or one of its officers
or
- c) due to an animal welfare emergency situation
and
- d) where permitted under a state or territory considered Approved QA Program describing the processor's system for managing untagged /unbranded pigs.

NLIS (Pig) Standards

Where pigs arrive without an NLIS approved device or brand, or correctly completed movement document, the establishment must follow the system(s) listed as part of the processing establishment's Approved Program. This will include the keeping of records and how the issue was rectified to enable traceability.

S5.2.3

Once slaughtered, the pig carcass must be identified in a manner that correlates with the NLIS approved device or brand of that animal and enables traceability to the last PIC of residence (other than the PIC of a saleyard) until the point at which:

- a) it has passed meat inspection and/or any residue testing if destined for the human food chain
or
- b) it has been inspected, and tested if appropriate, and found suitable for feeding to pets as required by the *Australian Standard for the Hygienic Production of Pet Meat*, if destined for the pet food chain
or
- c) it has been inspected and found to be fit for purpose and free from obvious notifiable diseases if processed for other purposes.

Note that:

- if moved or slaughtered under permit or direction of the state or territory animal health authority and the pig does not have an NLIS approved device or brand, the permit number or other reference number provided by that authority is to be used.

S5.2.4

The abattoir, knackery or other processor operator must upload the following information relating to each carcass to the database by the close of business on the next working day after the pigs are slaughtered or processed.

In the case of processing establishments, the:

- a) Date of slaughter
- a) Saleyard PIC, or for direct consignments, the consigning PIC
- b) For direct consignments, whether pigs have been bred on the PIC of consignment; and if not, the period of time they resided on the property of consignment
- c) Number of pigs slaughtered
- d) Movement document serial number
- e) Processor PIC.

Note that:

- If moved or slaughtered under permit or direction of the state animal health authority and the pig is not identified with a NLIS approved device or brand, the NLIS approved device or brand details above may be replaced by a permit or other reference number provided by that authority.

NLIS (Pig) Standards

S5.2.5

The operators of processing establishments and knackeries must reconcile the number of head killed with the numbers and details of carcasses uploaded to the movement database within two working days of the time of slaughter or processing.

S5.2.6

The processing plant or knackery operator must monitor the numbers of live pigs linked to its PIC on the movement database compared with the number of live pigs remaining on the premises at the end of each kill week with the view of reconciling the account numbers.

S5.2.7

If inconsistencies are noticed in S5.2.5 or S5.2.6, the operator of the knackery or processing establishment must resolve it on the movement database by close of the next business day.

S5.2.8

The knackery or other processing plant operator must take steps to confirm that the uploaded information has been received by the database and undertake corrective action for all error messages received from the database within seven working days.

S5.2.9

The knackery or other processing plant operator must dispose of all NLIS approved devices in a manner that prevents unauthorised recovery and re-use.

S5.3 Movement Information and Documentation

S5.3.1

A person must not slaughter or process a pig unless it is accompanied by completed movement documentation that records the PIC of last residence. This movement documentation may be:

- a) a PigPass National Vendor Declaration
- b) an alternative document approved in the jurisdiction containing the required movement information (e.g. waybill)
- c) the animal health authority permit when the pigs are not identified with a NLIS approved device
- d) any other state or territory specific approved documentation

Note that:

- For saleyard pigs, movement documents may be provided to the receiving abattoir by physically accompanying the transported pigs or being electronically transmitted prior to the end of the day of sale.

NLIS (Pig) Standards

- The animal health authority permit when the pigs are not identified with an NLIS approved device or brand does not replace the need for a completed movement document for pigs slaughtered at processors.

S5.3.2

Copies (i.e. physical/electronic) of movement documents must be kept by processors for three years.

S5.4 Managing Supply Chain Risks

S5.4.1

It is the responsibility of the knackery or other processing plant operator to establish if they are processing pigs coming from a property with a food safety, biosecurity or market eligibility PIC-based status.

S5.4.2

It is the responsibility of the abattoir or other processing plant operator to ensure the food safety, biosecurity or market eligibility instruction (where required/relevant) has been followed.

FINAL

Part 6: Agricultural Shows and Events

Scope

This Part of these standards applies to:

- 1) persons organising, operating or employed in agricultural shows and other such events at which pigs are present.

Objective

To ensure that pigs are correctly identified and that their movement to and from agricultural shows and other such events can be traced effectively and rapidly.

Standards incorporated into the new Regulations – Ss6.2.1, 6.2.2, 6.2.3

6.1 Property Identification

S6.1.1

The agricultural show/event organiser must ensure that the property or location where the event is to be held has an active PIC from their state or territory authority.

6.2 Identification of Pigs

S6.2.1

Pigs attending agricultural shows or other such events must be identified correctly with an NLIS approved device or brand, which is the responsibility of the pig owner or manager as per Part 1 of these standards.

S6.2.2

The agricultural show/event organiser must ensure that all pigs exhibited at the show are identified with an NLIS approved device or brand and the movement onto and off the showground is recorded in the database by the show/event operator.

S6.2.3

A person must only dispatch an animal from a show or event that is correctly identified with an NLIS approved device or brand.

Note that:

- Show and event organisers are not required to apply an NLIS post-breeder tag or brand to facilitate the return of a pig to its property of origin.

6.3 Movement Information and Documentation

S6.3.1

The agricultural show/event organiser must ensure a completed movement document for the pig(s) (see S1.4.2 and S1.4.3 for details) is provided by the exhibitor at the show or event.

S6.3.2

NLIS (Pig) Standards

The agricultural show/event organiser must ensure that each consignment of pigs moving onto the showground or event property is transferred onto the PIC of the property by notifying the database of the following information:

- a) Date of movement or show start date
- b) PIC of consignment (From PIC)
- c) PIC of showground/event
- d) Number of pigs
- e) Movement document serial number where provided

Note that:

- Movement document record keeping must comply with S1.4.3.
- Pigs leaving the agricultural show/event are required to be transferred to the destination PIC on the database as a property to property movement. This transfer must be undertaken by the agricultural show/event organiser but is the legal responsibility of the person in charge at the destination PIC. These pigs can be accompanied by the movement document used for moving the pigs onto the show/event PIC.
- Where stock are not returning to their property of last residence, a property to property movement must be completed (with a movement document, e.g. PigPass NVD or waybill), and be recorded on the database by the receiver, (as per other property to property movements) unless sold by public auction in which case the sale (yard) operator is responsible for recording the movement on the database.

6.4 Database Upload

S6.4.1

The agricultural show/event organiser must upload the movement relating to each mob of pigs to the database within two working days of the time of arrival at the show or before leaving the event, whichever is the sooner.

Note:

- Usually one movement document can be used to accompany pigs on their movement to the show and back to their property of origin.

S6.4.3

The agricultural show/event organiser must take steps to confirm that the uploaded information has been received by the database and undertake corrective action for all error messages received from the database within seven working days.

S6.5 Records

S6.5.1

The showground operator/event manager must reconcile the numbers of animals linked to its PIC on the database with the number remaining on the premises within seven days of the end of each show/event.

S6.5.2

NLIS (Pig) Standards

The showground operator/event manager must keep copies of movement documents for three years.

FINAL

Part 7: Exporters

Scope

This Part of these standards applies to:

- 1) persons operating export registered premises or depots or employed by live pig export businesses ('the exporter').

Objective

To ensure that all pigs are correctly identified and that their movement from their registered premises onto aggregation properties or export depots then off to port of export and 8Es (default live export PIC) is correctly recorded so that they can be traced effectively and rapidly.

These requirements are in addition to the requirements placed on producers by Part 1 of these standards and are to be read in conjunction with those.

Standards incorporated into the new Regulations – S7.2.1

S7.1 Property Identification

S7.1.1

The exporter must ensure that all properties upon which the pigs are to be held during the export preparation period, including pre-export quarantine and export depot properties, have an active PIC from their state or territory authority.

S7.2 Pig Identification Devices and Brands and Movement Documentation

S7.2.1

The exporter must take steps to ensure that pigs being prepared for export, during all stages including pre-export quarantine and export depot properties, are correctly identified with an NLIS approved device or brand as per Part 1 of these standards, unless specific approval for other arrangements is in place with the state animal health authorities.

S7.2.2

The exporter must ensure that all pigs being sourced for export are accompanied by a movement document, and that a movement document or equivalent is completed for all subsequent movements between export-related properties; except for the final movement from export depot to port where separate export certification/documentation is required.

S7.3 Database Notification

S7.3.1

The export depot operator must correctly notify the database of all pigs moving onto (except saleyard purchases) and between export-related properties within two working days of the movement as per S1.3.8 or before the next movement, whichever is sooner. This includes culls and individual pigs otherwise removed (e.g. placed back into the domestic supply chain) at

NLIS (Pig) Standards

any point along the export supply chain, except pigs consigned to an abattoir or saleyard.

S7.3.2

Where pigs are moved to the final export destination (i.e. the port of departure where they are loaded onto the export vessel or aircraft), the exporter must ensure that the pigs are transferred on the database to the port PIC then to the default export PIC, 'EEEEEEEE' (also known as the '8Es'), within two days of that movement.

S7.3.3

The exporter must reconcile the number of head exported with the numbers and details of numbers uploaded to the database within two days of the time of export.

S7.3.4

The exporter must reconcile the numbers of live pigs on its PIC on the database with the number of live pigs remaining on the premises at the end of each shipment.

S7.3.5

If inconsistencies are noticed in S7.3.3 or S7.3.4, the exporter must resolve it on the database within two working days.

S7.3.6

The exporter must take steps to confirm that the correct uploaded information has been received by the database and all warning and error messages received from the database are noted and acted on within seven working days.

S7.4 Managing Supply Chain Risks

S7.4.1

It is the responsibility of the exporter to establish if they have purchased pigs with a food safety, biosecurity or market eligibility PIC-based status.

S7.4.2

It is the responsibility of the exporter to ensure the food safety, biosecurity or market eligibility status instruction (where required/relevant) has been followed.

S7.4.3

Where pigs have a food safety, biosecurity or market eligibility status, the exporter will inform the buyers by the movement document or announce the status prior to the sale of those pigs.

NLIS (Pig) Standards

Glossary

Brand	State issued registered identifier that is applied to pigs like a tattoo.
Database	There are two databases that record the movement of pig mobs; the NLIS database (via the PigPass database), Australia's central livestock traceability database administered by NLIS Ltd for the purposes of biosecurity, food safety, product integrity and market access. Pig movement data can be uploaded either directly or via the PigPass database administered by APL.
Emergency	An emergency exists when animal welfare or human safety is potentially compromised.
Lifetime traceability	The ability to determine where a pig has been from the point of enquiry back to the property of birth.
Mob	A group of pigs that form a cohort and are moved together from one location to another. A mob may be comprised of many pigs or just one.
Movement document	A document that contains critical details that need to be recorded when pigs are moved, including the PIC from which the pigs were dispatched, the date of dispatch, the numbers and description of pigs being dispatched, the serial number of the movement document that accompanies the pigs, the name and signature of the person completing the movement document and date it was made, and the intended destination of the pigs
NLIS	National Livestock Identification System
NLIS approved device	A visual or RFID ear tag approved by NLIS for use on pigs which complies with these standards, and is printed with the PIC, the NLIS logo and P in a circle.
NVD	Document that combines product integrity status information with waybill movement information.
Person	Means more than one person (plural) and not just a specific person.
Person in charge	Where responsibility is shared and may extend along a hierarchy of management.
PIC	Property Identification Code – a unique identifier for a parcel of land that is linked to the owner's details.
PigPass ¹	A national tracking system which provides real time information on the movements of all pigs in Australia.
PigPass NVD	Is classified under the broad term of a movement document (see above). It is an NVD for pigs which can accompany all movements of pigs during their transportation between the PICs.
Property	A parcel of land that has been assigned a PIC by a state authority, consisting of one or more blocks operating as part of a livestock enterprise.
Reconcile	Make (in this case account) consistent with another, especially by allowing for transactions begun but not yet completed.
Vendor	Vendor is the person responsible for the Pigs on the residing PIC

¹ <http://www.pigpass.com.au/>

FINAL

Appendix D Orders to be brought into the Regulations under the preferred option

Housing Act 1983**LAND THE DIRECTOR OF HOUSING IS DEEMED TO HAVE AN INTEREST IN
UNDER SECTION 107 OF THE HOUSING ACT 1983****Port Phillip Housing Association**

I, Arthur Rogers, Director of Housing (the Director), hereby issue the following declaration pursuant to section 107 of the **Housing Act 1983** (the Act):

In accordance with a Funding Deed dated 9 December 2005 between the Director and Port Phillip Housing Association, the following land is land in which the Director is deemed to have an interest in under section 107 of the Act:

Volume	Folio	Address
11362	050	121 Liardet Street, Port Melbourne
11060	863	49-51 Vale Street, St Kilda
11114	741	83-87 Chapel Street, St Kilda

Dated 16 October 2015

Signed at Melbourne in the State of Victoria
ARTHUR ROGERS
Director of Housing

Livestock Disease Control Act 1994**ORDER DECLARING A CONTROL AREA TO PREVENT, CONTROL AND ERADICATE
THE EXOTIC DISEASE NEWCASTLE DISEASE (VIRULENT) IN VICTORIA**

I, Jaala Pulford, Minister for Agriculture and Minister responsible for the administration of the **Livestock Disease Control Act 1994**, make the following Order under section 29 of that Act.

1. Objectives

The objectives of this Order are –

- a) to declare the whole of Victoria a Control Area to prevent, control and eradicate the exotic disease, Newcastle disease (*virulent*);
- b) to specify the requirements which are to operate in the control area; and
- c) to prohibit the introduction of chickens into a commercial poultry flock except under specified circumstances.

2. Authorising provision

This Order is made under section 29 of the **Livestock Disease Control Act 1994**.

3. Duration of Order

This Order comes into operation on, and has effect for 12 months from, the day it is published in the Government Gazette.

4. Revocation

The Order made under section 29 of the **Livestock Disease Control Act 1994** by the Minister for Agriculture on 6 October 2014 declaring a control area for Newcastle disease and published in Government Gazette S 375 on 20 October 2014, is revoked.

5. Definitions

In this Order –

‘**chicken**’ means a member of the species *Gallus domesticus*;

‘**Chief Veterinary Officer**’ means the Chief Veterinary Officer of the Department of Economic Development, Jobs, Transport and Resources;

‘commercial poultry flock’ means a group of more than 1,000 chickens;

‘vaccination’ means administration of Newcastle disease vaccine in accordance with the manufacturer’s recommendations;

‘Standard Operating Procedures’ means the Newcastle Disease Vaccination Standard Operating Procedures 2013–2016 of the National Newcastle Disease Management Plan 2013–2016.

6. Control Area

The whole of Victoria is declared to be a Control Area in respect of the exotic disease Newcastle disease (*virulent*).

7. Requirements in the Control Area

- (1) The owner of a commercial poultry flock in the Control Area must ensure that all chickens in the flock are vaccinated and serologically monitored to demonstrate vaccination efficacy in accordance with the Standard Operating Procedures, unless otherwise approved in writing by the Chief Veterinary Officer.
- (2) The owner of a commercial poultry flock in the Control Area must –
 - (a) maintain for 3 years a record of all vaccine use by type of vaccine, date of administration, location, and age and number of chickens vaccinated;
 - (b) advise the Chief Veterinary Officer of any adverse reactions to the vaccine within 48 hours of the event;
 - (c) not introduce chickens into a commercial poultry flock unless the chickens have been vaccinated in accordance with the Standard Operating Procedures and are accompanied by a vendor declaration stating the age and number of the chickens and the date(s) and type(s) of Newcastle disease vaccine administered, unless otherwise approved by the Chief Veterinary Officer;
 - (d) maintain for 3 years a record of vendor declarations received under sub-clause (2)(c) for poultry introduced to the flock;
 - (e) maintain for 3 years records of any serological monitoring for Newcastle disease (*virulent*) undertaken on the flock;
 - (f) in accordance with any directions of the Chief Veterinary Officer, submit the commercial poultry flock for sampling for Newcastle disease (*virulent*) to a registered veterinary practitioner, an inspector, or a person authorised by the Chief Veterinary Officer. Such samples must be submitted to a registered veterinary diagnostic laboratory for testing; and
 - (g) promptly provide access to records referred to in this part to an inspector upon request.

8. Exemption

Clause 7 of this Order does not apply to the owner of Specific Pathogen Free poultry or other highly biosecure commercial poultry, who is the holder of a permit issued under section 30(2) of the **Livestock Disease Control Act 1994** and who is operating in accordance with the conditions of that permit.

Dated 26 October 2015

HON. JAALA PULFORD MP
Minister for Agriculture

Livestock Disease Control Act 1994
ORDER DECLARING A CONTROL AREA FOR
MENANGLE VIRUS (PORCINE PARAMYXOVIRUS) AND
BUNGOWANNAH VIRUS (PORCINE MYOCARDITIS)

Pursuant to section 29 of the **Livestock Disease Control Act 1994** (the Act), I, Jaala Pulford, Minister for Agriculture, make the following Order declaring an area to be a control area for the purpose of preventing, controlling or eradicating the exotic diseases Menangle virus (porcine paramyxovirus) and Bungowannah virus (porcine myocarditis) and specifying the prohibitions, restrictions and requirements which are to operate in the control area.

1. Control Area

I declare the State of Victoria to be a control area in respect of the exotic diseases Menangle virus (porcine paramyxovirus) and Bungowannah virus (porcine myocarditis).

2. Prohibitions, restrictions and requirements

I specify the following prohibitions, restrictions and requirements that are to operate in the control area:

- 2.1 A person who dispatches a pig for sale at a saleyard or for slaughter at an abattoir must, no later than the time of delivery, provide the person receiving the pig with a declaration under section 18A of the **Stock (Seller Liability and Declarations) Act 1993** (National Vendor Declaration).
- 2.2 A person who dispatches a pig to a place that is not a saleyard or an abattoir must, no later than the time of delivery, provide the person receiving the pig with a National Vendor Declaration.
- 2.3 Clause 2.2 does not apply if the dispatching of the pig does not involve a change of ownership and:
 - (a) the property from which the pig was dispatched can otherwise be identified at any time during the life of the pig; or
 - (b) the pig is dead at the time of the dispatch and is dispatched to a knackery.
- 2.4 A person who receives a National Vendor Declaration in accordance with subclauses 2.1 or 2.2 must retain the form for 3 years and make it available to an Inspector authorised under the Act on request.
- 2.5 A person who receives a National Vendor Declaration as a selling agent must provide a copy of the National Vendor Declaration to the purchaser of any pig to which the National Vendor Declaration relates.

3. Classes and descriptions of livestock affected by this declaration:

The following classes and descriptions of livestock are affected by this Order:

Pigs.

This Order has effect for 12 months from the day it is published in the Government Gazette.

Dated 22 March 2015

JAALA PULFORD MP
Minister for Agriculture

Livestock Disease Control Act 1994

NOTICE FOR THE PERMANENT IDENTIFICATION OF CATTLE

I, Joanne de Morton, Acting Secretary to the Department of Primary Industries in accordance with sections 9A(1) and (3) of the **Livestock Disease Control Act 1994** ('the Act') specify the manner of the permanent identification of cattle with effect from 6 October 2008 as follows:

Definitions

'**machine readable**' means can be electronically read using a correctly functioning reader.

'**database**' means the NLIS computer database managed by the Meat & Livestock Australia Limited.

1. For cattle born in Victoria prior to removal from their property of birth, the owner of the cattle must obtain and apply or administer as directed to the cattle either –
 - (a) a white plastic tag referred to as a 'NLIS endorsed breeder device' obtained from an approved supplier of the device under section 9C of the Act, applied to the right (offside) ear of the animal which –
 - (i) is marked with black lettering setting out –
 - (A) the property identification code for the property of birth allocated by the Secretary in accordance with section 9B of the Act; and
 - (B) an individual number for that animal in accordance with section 9A(1) of the Act; and
 - (ii) contains a machine readable microchip in accordance with section 9A(3) of the Act, which is encoded with a unique unalterable number which when downloaded onto the database cross references to the information relating to the property and animal set out in paragraph 1(a)(i); or
 - (b) a combination of –
 - (i) a white plastic tag referred to as a 'NLIS endorsed breeder device' obtained from an approved supplier under section 9C of the Act, applied to the right (offside) ear of the animal and which is marked with black lettering setting out –
 - (A) the property identification code for the property of birth allocated by the Secretary in accordance with section 9B of the Act; and
 - (B) an individual number for that animal in accordance with section 9A(1) of the Act; and
 - (ii) a rumen bolus obtained from an approved supplier under section 9C of the Act administered orally to the animal, for lodgement in the rumen or reticulum of the animal and which contains a machine readable microchip in accordance with section 9A(3) of the Act, which is encoded with a unique unalterable number which, when downloaded onto the database, cross references electronically to the information relating to the property and animal set out in paragraph 1(b)(i).
2. For cattle removed from their property of birth and moved to a property in Victoria, the owner or livestock manager of the cattle must (if the cattle have not already been identified with a NLIS endorsed breeder or post breeder device) –
 - (i) within 30 days of arriving at the property in Victoria; or
 - (ii) if moved within 30 days of arriving at the property in Victoria, before removal from that property; or
 - (iii) if an NLIS device that has been applied and lost, before removal from that property; or
 - (iv) if an NLIS device is not machine readable, may remove the non-readable NLIS ear tag or in the case of a non-readable NLIS rumen bolus, remove the accompanying ear tag in accordance with the Exemption Order under section 6(3A) of the Act; and

obtain and apply or administer as directed to the cattle either –

- (a) an orange plastic tag known as a ‘NLIS endorsed post breeder device’ obtained from an approved supplier of the device under section 9C of the Act applied to the right (offside) ear of the animal and which –
 - (i) is marked with black lettering setting out –
 - (A) the property identification code for the property where the animal is now kept, allocated by the Secretary in accordance with section 9B of the Act; and
 - (B) a number identifying the individual animal in accordance with section 9A(1) of the Act; and
 - (ii) contains a machine readable microchip in accordance with section 9A(3) of the Act, which is encoded with a unique unalterable machine readable number which, when downloaded onto the database, cross references to the information relating to the property and animal set out in paragraph 2(a)(i); or
 - (b) a combination of –
 - (i) an orange plastic tag known as a ‘NLIS endorsed post breeder device’ obtained from an approved supplier under section 9C of the Act, applied to the right (offside) ear of the animal and which is marked with black lettering setting out –
 - (A) the property identification code where the animal is kept and allocated by the Secretary in accordance with section 9B of the Act; and
 - (B) a number identifying the individual animal in accordance with section 9A(1) of the Act; and
 - (ii) a rumen bolus obtained from an approved supplier under section 9C of the Act, which must be administered orally to the animal, for lodgement in the rumen or reticulum of the animal and which contains a machine readable microchip in accordance with section 9A(3) of the Act, which is encoded with a unique unalterable number which, when downloaded onto the database system, cross references to the information relating to the property and animal set out in paragraph 2(b)(i).
3. For cattle dispatched from a property for sale and moved to a saleyard or scales operation in Victoria, the Selling agent or scales operator must, before sale, ensure an NLIS device in cattle arriving at the saleyard or scales operation is present and machine readable; and
- (i) if an NLIS device is not present; or
 - (ii) if an NLIS device is not machine readable, remove the non-readable ear tag or the accompanying ear tag for a non-readable rumen bolus in accordance with the Exemption Order under section 6(3A) of the Act; and

apply or administer as directed to the cattle –

- (a) an orange plastic tag known as a ‘NLIS endorsed post breeder device’ obtained from an approved supplier of the device under section 9C of the Act applied to the right (offside) ear of the animal and which –
 - (i) is marked with black lettering setting out –
 - (A) the property identification code for the saleyard or scales operation where the animal is now kept, allocated by the Secretary in accordance with section 9B of the Act; and
 - (B) a number identifying the individual animal in accordance with section 9A(1) of the Act; and
 - (ii) contains a machine readable microchip in accordance with section 9A(3) of the Act, which is encoded with a unique unalterable machine readable number which, when downloaded onto the database, cross references to the information relating to the saleyard or scales and animal set out in paragraph 2(a)(i).

4. On this Notice taking effect, the Notice for the Permanent Identification of Cattle published in Government Gazette Number S255 on 13 December 2005 at pages 4 to 5 is revoked.

Dated 16 September 2008

JOANNE de MORTON
Acting Secretary

Mineral Resources (Sustainable Development) Act 1990

DEPARTMENT OF PRIMARY INDUSTRIES

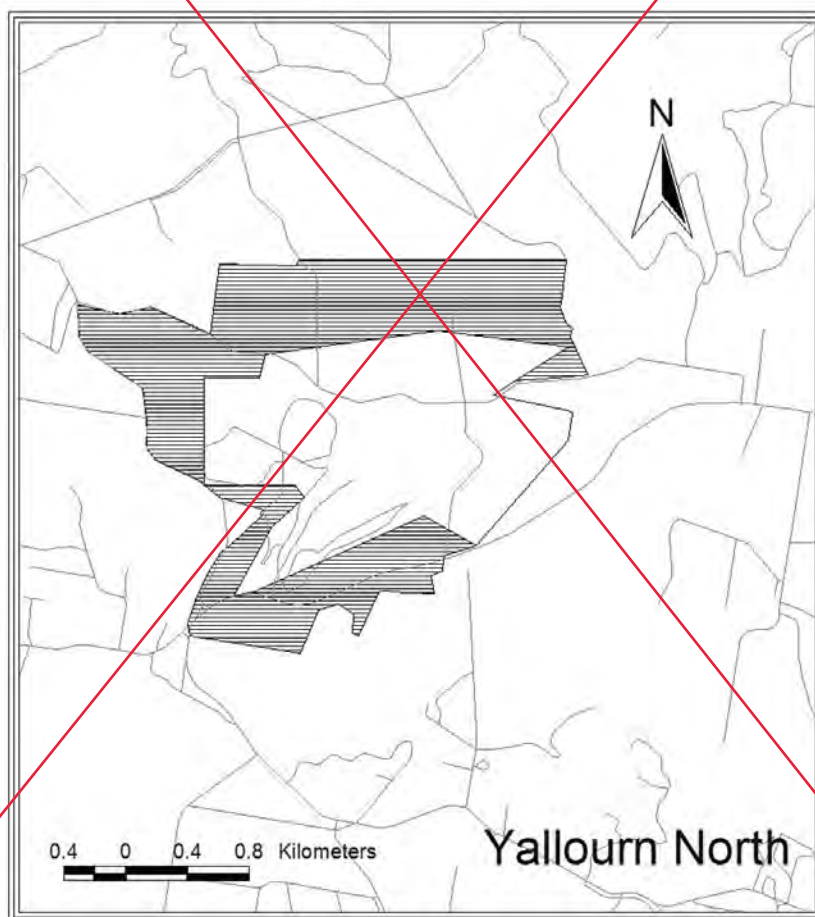
Exemption from a Mining and Exploration Licence

I, Richard Aldous, Executive Director Minerals and Petroleum pursuant to section 7 of the **Mineral Resources (Sustainable Development) Act 1990** and under delegation by the Minister for Resources, hereby exempt all land situated within the boundaries of the hatched area on the attached map (Schedule A) from being subject to a mining and exploration licence.

Dated 18 September 2008

RICHARD ALDOUS
Executive Director
Minerals and Petroleum

Schedule A



7. Leave Arrangements~~There are no leave provisions for these part-time statutory positions.~~**8. Prior Service**~~Not applicable.~~**Flora and Fauna Guarantee Act 1988**~~ADDING ITEMS TO THE LIST OF TAXA AND COMMUNITIES OF
FLORA AND FAUNA WHICH ARE THREATENED~~~~The Governor in Council under section 10(1) of the **Flora and Fauna Guarantee Act 1988**, adds the items listed in the Schedule below to the list of taxa and communities of flora and fauna which are threatened.~~**Schedule**~~ITEMS TO BE ADDED TO THE LIST OF TAXA AND COMMUNITIES OF
FLORA AND FAUNA WHICH ARE THREATENED~~

<i>Allisoniella nigra</i>	Black Threadwort
<i>Dieranoloma diaphanoneuron</i>	Moss species
<i>Isoodon obesulus</i>	Southern Brown Bandicoot
<i>Plagiochila pleurata</i>	Leafy liverwort species
<i>Stylidium armeria</i> subsp. nov. (Riddells Ck.)	Hairy-leaved Trigger-plant

~~Port Phillip Bay Entrance Deep Canyon Marine Community~~~~Dated 14 July 2009~~~~Responsible Minister~~~~GAVIN JENNINGS~~~~Minister for Environment and Climate Change~~~~TOBY HALLIGAN~~~~Clerk of the Executive Council~~**Livestock Disease Control Act 1994****EXEMPTION ORDER UNDER SECTION 6(3A)**

The Governor in Council makes the following Order:

1. ObjectiveThe objective of this Order is to exempt certain classes of cattle and certain classes of person from certain identification requirements in the **Livestock Disease Control Act 1994** and Livestock Disease Control Regulations 2006.**2. Authorising provision**This Order is made under section 6(3A) of the **Livestock Disease Control Act 1994**.**3. Revocation**

The following Order is revoked –

Order of Exemption under section 6(3A) of the **Livestock Disease Control Act 1994** made by the Governor in Council on 8 August 2006 and published in Government Gazette G51 on 21 December 2006 at pages 2843–2846.

4. Definitions

In this Order –

‘Butcher’s PIC’ means a Butcher’s Property Identification Code;

‘Vendor Declaration’ means –

- (a) a declaration made in relation to the movement of livestock –
 - (i) in the case of cattle, the National Vendor Declaration (Cattle) and Waybill Edition 1, and the European Union Vendor Declaration (Cattle) and Waybill Edition 1 and the National Vendor Declaration (Bobby Calves) 1st Edition;
 - (ii) in the case of sheep, the National Vendor Declaration (Sheep & Lambs) and Waybill Edition 1;
 - (iii) in the case of goats, the National Vendor Declaration (Goats) and Waybill Edition 1;
 - (iv) in the case of pigs, the Pig Pass National Vendor Declaration Edition 1; or
 - (v) any other declaration specified under the Livestock Disease Control Regulations 2006 or
- (b) any other form of declaration made in relation to the movement of livestock that contains the same particulars that are contained in the declaration referred to in paragraph (a) including –
 - (i) the property identification code that identifies the property of dispatch of the livestock; and
 - (ii) the date of dispatch of the livestock; and
 - (iii) the number of livestock being dispatched; and
 - (iv) the name and signature of the person making the declaration; and
 - (v) the date the declaration is made; and
 - (vi) the intended destination of the livestock;

‘Machine-readable device’ means an NLIS device containing a microchip that can be electronically read using a correctly functioning and tested reader or scanning machine;

‘NLIS’ means the National Livestock Identification System;

‘NLIS database’ means the database system managed by Meat and Livestock Australia Ltd. for the administration of the NLIS;

‘NLIS database account’ means the account that enables access to the NLIS database through the NLIS internet site for the recording of cattle movement information onto the database system;

‘NLIS device’ means a device for the permanent identification of livestock licensed by Meat and Livestock Australia Ltd for the purpose of the NLIS;

‘Regulations’ means the Livestock Disease Control Regulations 2006;

‘saleyard’ means the venue where a public auction of cattle is conducted or a public scale operation where cattle are sold;

‘Stock Agent PIC’ means a Stock Agent Property Identification Code;

‘the Act’ means the **Livestock Disease Control Act 1994**.

5. Exemptions

- (1) A person is exempt from the requirements of Regulations 8(b) & (d) with respect to cattle that are –
 - (a) identified with an NLIS device; and
 - (b) accompanied by an accurate and fully completed Vendor Declaration.

- (2) The owner of any cattle is exempt from the requirements of section 9A(1)(a) and 9A(1)(b) of the Act and regulation 21(1)(a) of the Regulations with respect to –
 - (a) cattle that remain continuously on their property of birth; or
 - (b) cattle that are less than six weeks of age that are consigned directly to a knackery for disposal and that have a transaction tail tag or calf ear tag affixed in accordance with section 9(a); or
 - (c) cattle moved in accordance with a permit issued by an Inspector of Livestock employed by the Department of Primary Industries and accompanied by an accurate and fully completed Vendor Declaration.
- (3) An owner or livestock manager is exempt from the requirements of section 9A(2) of the Act in the case of cattle identified by an NLIS device that is not machine readable, if the owner or livestock manager, before dispatch for sale or slaughter –
 - (a) removes the non-readable ear tag device or, in the case of a non-readable rumen bolus device, the accompanying ear tag; and
 - (b) makes and keeps a record of the property identification code and the individual number printed on the non-readable NLIS ear tag or for a non-readable or rumen bolus NLIS device the information printed on the accompanying ear tag; and
 - (c) ensures an approved machine readable post-breeder NLIS device bearing the property identification code allocated to that property under 9B of the Act is immediately attached to the cattle in accordance with section 9A(1) of the Act and regulation 21 of the Regulations; and
 - (d) ensures the printed property identification code and the number identifying the individual cattle printed on the removed non-readable device and the printed or electronic information on the replacement machine readable NLIS post breeder device is provided to the Secretary or the NLIS database administrator of Meat & Livestock Australia Limited within 24 hours in the manner required by the Secretary; and
 - (e) makes and keeps a written record of all details in relation to the removal of any tag.
- (4) A selling agent or a cattle scale operator is exempt from the requirements of section 9A(2) of the Act in the case of cattle identified with an NLIS device that is non-readable, provided the selling agent or scale operator, before sale –
 - (a) removes the non-readable NLIS ear tag or in the case of a non-readable NLIS bolus, the accompanying printed ear tag; and
 - (b) ensures a machine readable approved post-breeder NLIS device bearing the property identification code allocated to that saleyard or cattle scale operation under 9B of the Act is immediately attached to the cattle in accordance with section 9A(1) and (3) of the Act and regulation 21 of the Regulations; and,
 - (c) makes and keeps a record of the property identification code and the individual number printed on the non-readable NLIS ear tag or in the case of a non-readable NLIS rumen bolus device, the accompanying ear tag; and
 - (d) ensures the machine readable microchip information or printed information on the replacement post-breeder device affixed according to sub-clause (b) and the printed property identification code and the number identifying the individual cattle printed on the non-readable device and the replacement post breeder identification device is provided to the Secretary or the NLIS database administrator of Meat & Livestock Australia Limited in the manner required by the Secretary; and
 - (e) ensures a written record is kept by the selling agent or scale operator of all details in relation to the removal and replacement of any non-readable tag.

- (5) Where cattle are exhibited for sale at a saleyard and the affixed NLIS device is not machine readable, and an approved post-breeder device cannot be affixed in accordance with sub-clause (3) because it is unsafe to do so, a selling agent or scale operator is exempt from the requirements of section 9(b) of the Act –
- (a) the cattle are identified prior to leaving the saleyard with a blue tail tag supplied by the Secretary and bearing an identification code assigned by the Secretary to the selling agent or scale operator; and
 - (b) the requirements of sub-clause (7) are complied with.
- (6) Where cattle are exhibited for sale at a saleyard and have arrived at the saleyard without an NLIS device, a selling agent or scale operator is exempt from the requirements of section 9(b) of the Act –
- (a) if the selling agent or scale operator –
 - (i) ensures cattle are identified before sale with an NLIS post-breeder device bearing a property identification code allocated to that saleyard under section 9B of the Act; and
 - (ii) ensures the requirements of sub-clause (7) are complied with; or
 - (b) if in the case of cattle considered unsafe to apply an NLIS device at the saleyards –
 - (i) the cattle is identified before sale with a blue tail tag supplied by the Secretary and bearing an identification code assigned by the Secretary to the selling agent or scale operator; and
 - (ii) the cattle is sold direct for slaughter; and
 - (iii) the requirements of sub-clause (7) are complied with; or
- (7) For the purposes of sub-clauses 5(b), 6(a) and 6(b), the following details are to be recorded by the selling agent or scale operator by close of business on the day the device or tag is applied –
- (a) the property identification code of the property from which the cattle were dispatched; and
 - (b) the name and address of the person who dispatched the cattle; and
 - (c) the number on the device or tag applied; and
 - (d) the date on which the device or tag was applied; and
 - (e) the serial number of the accompanying Declaration.
- (8) A record of details made for the purposes of sub-clause (7) must be kept for two years.
- (9) A person subject to the requirements of section 94A(2)(b) who is a stock and station agent or is purchasing cattle intended for slaughter within seven days is exempt from complying with regulation 57(c)(ii) where that person, or his or her representative –
- (a) has applied for and been allocated a property identification code by the Secretary that is –
 - (i) in the case of a stock and station agent, a Stock Agent PIC; or
 - (ii) in the case of a person purchasing cattle intended for slaughter within seven days, a Butcher's PIC; and
 - (b) provides the code referred to in paragraph (a) to the auctioneer or scale operator selling the cattle in place of the property identification code of the property on which the cattle are to be kept after the purchase; and
 - (c) holds a current NLIS database account with the administrator of the NLIS database.

- (10) A person to which sub-clause (9) applies must ensure that, where the cattle are not slaughtered within seven days, the NLIS database is notified of the property identification code of the property to which the cattle were first taken after their purchase.
- (11) A person who carries on business as a cattle scale operator is exempt from regulation 61(b)(ii) where the scale operator provides the Stock Agent PIC or Butcher's PIC (if provided by the purchaser of the cattle) to the Secretary or a person nominated by the Secretary for the purposes of regulation 61, by close of business on the next day after the cattle are sold.
- (12) A person who conducts a public auction of cattle, other than at a saleyard, is exempt from regulation 62(b)(ii) where the auctioneer provides the Stock Agent PIC or Butcher's PIC (if provided by the purchaser of the cattle) to the Secretary or a person nominated by the Secretary for the purposes of regulation 62 by close of business on the next day after the cattle are sold.
- (13) A person who conducts a public auction of cattle at a saleyard is exempt from regulation 63(1)(a)(iii) where the auctioneer provides the Stock Agent PIC or Butcher's PIC (if provided by the purchaser of the cattle) to the person nominated by the Secretary, for the purposes of regulation 63, by midday on the next day after the cattle are sold.
- (14) A person who operates a saleyard at which cattle are sold or passed in is exempt from regulation 64(b)(ii) where the saleyard operator provides the Stock Agent PIC or Butcher's PIC (if provided by the purchaser of the cattle) to the Secretary or a person nominated by the Secretary, for the purposes of regulation 64, by close of business on the next day after the cattle are sold or passed in.
- (15) A record of details made for the purposes of sub-clause (3) must be kept for two years.
- (16) The operator of a knackery is exempt from section 94B(a)(iv) of the Act.

Dated 7 July 2009
Responsible Minister
JOE HELPER MP
Minister for Agriculture

TOBY HALLIGAN
Clerk of the Executive Council

Livestock Disease Control Act 1994

AMENDMENT ORDER UNDER SECTION 6(1)

The Governor in Council makes the following Order:

1. Objective

The objective of this Order is to correct an error in the Order made on 7 July 2009 exempting certain classes of cattle and certain classes of person from certain identification requirements in the **Livestock Disease Control Act 1994** and Livestock Disease Control Regulations 2006.

2. Authorising provision

This Order is made under section 6(1) of the **Livestock Disease Control Act 1994**.

3. Amendment to Order

Clause 3 of the Exemption Order made on 7 July 2009 is amended to delete '8 August 2006' and insert '19 December 2006' as the date on which the Order to be revoked was made.

Dated 14 July 2009
Responsible Minister
JOE HELPER MP
Minister for Agriculture

TOBY HALLIGAN
Clerk of the Executive Council

Appendix E Schedule of diseases (Order declaring diseases and exotic diseases)



Victoria Government Gazette

No. S 280 Wednesday 7 September 2016
By Authority of Victorian Government Printer

Livestock Disease Control Act 1994

ORDER DECLARING DISEASES AND EXOTIC DISEASES

Order in Council

The Administrator, as the Governor's deputy, with the advice of the Executive Council, under section 6(2) of the **Livestock Disease Control Act 1994** –

- (a) revokes the Order declaring diseases and exotic diseases for the purposes of the Act made by the Governor in Council on 8 September 2015 and published in Government Gazette G 36 on 10 September 2015; and
- (b) declares the contagious or infectious diseases and conditions listed in Schedule 1 to be diseases for the purposes of the Act; and
- (c) declares the contagious or infectious diseases and conditions listed in Schedule 2 to be exotic diseases for the purposes of the Act.

This Order comes into operation on, and has effect for 12 months from, the day it is published in the Government Gazette.

SCHEDULE 1

*Diseases

*See section 3 of Act for definition of 'disease'

Part A Diseases of Mammals and Birds

Anaplasmosis	Lead poisoning (in food producing livestock)
Anthrax	Leptospirosis
Avian paramyxovirus Type 1	Listeriosis
Avian tuberculosis (<i>Mycobacterium avium</i>)	Mucosal disease
Babesiosis	Ovine brucellosis
Bovine genital campylobacteriosis	Ovine footrot
Bovine malignant catarrh	Ovine ked
Bovine malignant tumour of the eye larger than 2 cm	Ovine lice
Buffalo fly	Paratuberculosis (Johne's disease)
Caprine arthritis encephalitis	Psittacosis
Cattle tick	Pullorum disease (<i>Salmonella pullorum</i>)
<i>Cysticercus bovis</i> (<i>Taenia saginata</i>)	Salmonellosis
Enzootic bovine leucosis	Strangles
Equine herpes-virus 1 (abortigenic and neurological strains)	Swine brucellosis (<i>B. suis</i>)
Equine infectious anaemia	Trichomoniasis
Equine viral arteritis	Tuberculosis (other than <i>Mycobacterium bovis</i>)
Infectious bovine rhinotracheitis	Verocytotoxigenic <i>E. coli</i>
Infectious laryngotracheitis	

Part B Diseases of Bees

American foul brood (<i>Paenibacillus larvae</i>)	European foul brood (<i>Melissococcus plutonius</i>)
Braula fly (<i>Braula coeca</i>)	Nosema (<i>Nosema apis</i> and <i>Nosema ceranae</i>)
Chalk brood disease	

SPECIAL

Part C Diseases of Fish**Diseases of Fin Fish**

Aeromonas salmonicida (atypical strains)
 Epizootic haematopoietic necrosis (EHN virus)
 Infection with *Aphanomyces invadans*
 (epizootic ulcerative syndrome)

Diseases of Amphibians

Chytridiomycosis (*Batrachochytrium dendrobatidis*)
 Infection with Ranavirus

Diseases of Molluscs

Bonamiosis (*Bonamia exitiosus*)

SCHEDULE 2***Exotic Diseases**

*See section 3 of Act for definition of 'exotic disease'

Part A Exotic Diseases of Mammals and Birds

African horse sickness	Leishmaniosis of any species
African swine fever	Louping ill
Aujeszky's disease	Lumpy skin disease
Australian lyssaviruses including bat lyssavirus	Maedi-visna
Avian influenza	Malignant catarrhal fever (wildebeest-associated)
Bluetongue	Menangle virus infection (porcine paramyxovirus)
Borna disease	Nairobi sheep disease
Bovine Viral Diarrhoea Virus Type 2	Newcastle disease (<i>virulent</i>)
<i>Brucella canis</i>	Nipah virus infection
Brucellosis – <i>Brucella abortus</i>	Peste des petits ruminants
Brucellosis – caprine and ovine (<i>B. melitensis</i>)	Porcine epidemic diarrhoea virus
Camelpox	Porcine myocarditis (Bungowannah virus infection)
Canine Monocytic Ehrlichiosis (CME) (<i>Ehrlichia canis</i>)	Porcine reproductive and respiratory syndrome
Chagas' disease (<i>T. cruzi</i>)	Post-weaning multi-systemic wasting syndrome
Classical swine fever	Potomac fever
Contagious agalactia	Pulmonary adenomatosis (Jaagsiekte)
Contagious bovine pleuropneumonia	Rift Valley fever
Contagious caprine pleuropneumonia	Rinderpest
Contagious equine metritis	<i>Salmonella enteritidis</i> infection in poultry
Crimean Congo haemorrhagic fever	Salmonellosis (<i>S. abortus-equi</i>)
<i>Cysticercus cellulosae</i> (<i>Taenia solium</i>)	Salmonellosis (<i>S. abortus-ovis</i>)
Devil facial tumour disease	Screw worm fly – New World (<i>Cochliomyia hominivorax</i>)
Dourine	Screw worm fly – Old World (<i>Chrysomya bezziana</i>)
Duck virus enteritis (duck plague)	Sheep pox
Duck virus hepatitis	Sheep scab
East coast fever (<i>Theileria parva</i>) and Mediterranean Theileriosis (<i>Theileria annulata</i>)	Spongiform encephalopathies
<i>Echinococcus multilocularis</i>	Surra (<i>Trypanosoma evansi</i>)
Elaphostrongylosis	Swine influenza
Encephalitides (tick-borne)	Swine vesicular disease
Enzootic abortion of ewes	
Epizootic haemorrhagic disease (clinical disease)	

Epizootic lymphangitis	Teschen disease (Porcine enterovirus encephalomyelitis)
Equine encephalomyelitis (eastern, western, Venezuelan)	Transmissible gastroenteritis
Equine encephalosis	Transmissible spongiform encephalopathies (bovine spongiform encephalopathy, chronic wasting disease of deer, feline spongiform encephalopathy, scrapie)
Equine influenza	Trichinellosis
Equine piroplasmiasis (<i>Babesia caballi</i> and <i>Theileria equi</i>)	Trypanosomiasis (tsetse fly associated)
<i>Fasciola gigantica</i>	Tuberculosis (<i>Mycobacterium bovis</i>)
Fowl typhoid (<i>S. gallinarum</i>)	Tularaemia
Getah virus	Turkey rhinotracheitis (avian metapneumovirus)
Goat pox	Vesicular exanthema
Glanders	Vesicular stomatitis
Haemorrhagic septicaemia	Warble fly myiasis
Heartwater	Wesselsbron disease
Hendra virus	West Nile virus clinical infection
Infectious bursal disease (hypervirulent and exotic antigenic variant forms)	
Japanese encephalitis	
Jembrana disease	

Part B Exotic Diseases of Bees

Africanised bees	Tropilaelaps mite (<i>Tropilaelaps clareae</i> and <i>Tropilaelaps mercedesae</i>)
Tracheal mite (<i>Acarapis woodi</i>)	Varroosis (<i>Varroa destructor</i>)
	Varroosis (<i>Varroa jacobsoni</i>)

Part C Exotic Disease of Fish

Exotic Diseases of Fin Fish

Bacterial kidney disease (<i>Renibacterium salmoninarum</i>)
Channel catfish virus disease
Enteric redmouth disease (<i>Yersinia ruckeri</i> – Hagerman strain)
Enteric septicaemia of catfish (<i>Edwardsiella ictaluri</i>)
European catfish virus / European sheatfish virus
Furunculosis (<i>Aeromonas salmonicida</i> subsp. <i>salmonicida</i>)
Grouper iridoviral disease
Gyrodactylosis (<i>Gyrodactylus salaris</i>)
Infection with salmonid alphavirus
Infectious haematopoietic necrosis
Infectious pancreatic necrosis
Infection with HPR-deleted or HPR0 infectious salmon anaemia virus
Infectious spleen and kidney necrosis virus-like (ISKNV-like) viruses
Koi herpesvirus disease
Piscirickettsiosis (<i>Piscirickettsia salmonis</i>)
Red sea bream iridoviral disease
Spring viraemia of carp
Viral encephalopathy and retinopathy
Viral haemorrhagic septicaemia
Whirling disease (<i>Myxobolus cerebralis</i>)

Exotic Diseases of Molluscs

Abalone viral ganglioneuritis

Bonamiosis (*Bonamia ostreae*)

Iridoviroses

Marteilioides chungmuensis

Marteiliosis (*Marteilia refringens*, *Marteilia sydneyi*)

Mikrocytosis (*Mikrocytos mackini*)

Ostreid herpesvirus-1 μ variant (OsHV-1 μ var)

Perkinsosis (*Perkinsus marinus*, *Perkinsus olseni*)

Withering syndrome of abalones (*Xenohalictis californiensis*)

Exotic Diseases of Crustacea

Acute hepatopancreatic necrosis disease (AHPND)

Crayfish plague (*Aphanomyces astaci*)

Gill-associated virus

Hepatopancreatic microsporidiosis (EHP) (*Enterocytozoon hepatopenaei*)

Infection with *Candidatus Hepatobacter penaei*

Infection with yellow head virus

Infectious hypodermal and haematopoietic necrosis

Infectious myonecrosis

Monodon slow growth syndrome

Taura syndrome

White spot disease

White tail disease

Dated 6 September 2016

Responsible Minister:

JAALA PULFORD

Minister for Agriculture

ANDREW ROBINSON
Clerk of the Executive Council

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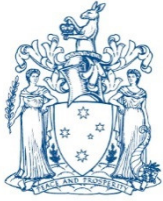
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Appendix F Draft Human Rights Certificate



Minister for Agriculture

SUBORDINATE LEGISLATION ACT 1994

HUMAN RIGHTS CERTIFICATE

(Section 12A)

Livestock Disease Control Regulations 2017

I, Jaala Pulford, Minister for Agriculture, and Minister responsible for administering the **Livestock Disease Control Act 1994** certify under section 12A of the **Subordinate Legislation Act 1994** that, in my opinion, the proposed Livestock Disease Control Regulations 2017 do not limit any human right set out in the **Charter of Human Rights and Responsibilities Act 2006**.

Dated:

Hon Jaala Pulford MP
Minister for Agriculture

